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AN ANALYSIS, EVALUATION, AND SELECTION OF CLINICAL USES OF MUSIC IN THERAPY.

BY- GASTON, E. THAYER SCHNEIDER, ERWIN H.
KANSAS UNIV., LAWRENCE
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A SYMPOSIUM OF MUSIC THERAPISTS WAS HELD IN JUNE 1964 TO PLAN A COMPREHENSIVE RESUME OF RESEARCH AND CLINICAL PRACTICE IN MUSIC THERAPY. FOLLOWING THE SYMPOSIUM, EACH PARTICIPANT SELECTED RESEARCH STUDIES APPROPRIATE TO HIS AREA AND CHOSE CLINICIANS TO PREPARE CLINICAL DESCRIPTIONS AND CASE STUDIES. PAPERS WERE ASSEMBLED BY EACH PARTICIPANT AND FORWARDED TO THE PROJECT DIRECTOR, WHO PREPARED A PRELIMINARY VERSION OF THE RESUME, WHICH WAS SUBMITTED TO THE CONTRIBUTORS FOR COMMENTS AND CRITICISMS. THE FINAL VERSION, CONTAINING NINE CHAPTERS, IS ADDRESSED TO READERS FROM SEVERAL DIFFERENT PROFESSIONS. THE NEED FOR AN ORGANIZED BODY OF MUSIC THERAPY KNOWLEDGE AND A SET OF TESTABLE HYPOTHESES DICTATED THE CONTENT FOR THE VOLUME. (JC)

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AN ANALYSIS, EVALUATION, AND SELECTION OF CLINICAL USES OF MUSIC IN THERAPY

Cooperative Research Project No. F-044

E. Thayer Gaston, Editor and Project Director
Erwin H. Schneider, Associate Editor

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PREFACE

A symposium of music therapists was held at Lawrence, Kansas, in June, 1964, to plan a comprehensive résumé of research and clinical practice in music therapy. The need for such a symposium had been apparent to music therapists for some time. Although the annual meetings of the National Association for Music Therapy had served to give direction to the young discipline, the overall "point of view" lacked sufficient clarity. No organized source of information functionally blending research and clinical practice in music therapy existed. The symposium and the subsequent preparation of the résumé were made possible by a grant from the United States Office of Education, Department of Health, Education, and Welfare, under Public Law 531.

The eleven symposium participants were teachers of music therapy in colleges and universities, held advanced degrees, and were registered music therapists. Prior to the symposium, they were apprised of the nature and intent of the conference. Each was asked to propose an agenda for the symposium and an outline for the résumé, with particular attention to the areas of music therapy in which he was most expert. During the symposium, unanimity of opinion was achieved concerning the most important principles and constructs of music therapy. The conferees identified and delineated areas of clinical practice in music therapy, research pertinent to these areas, and discussed in some detail the organization of personnel for the development of the résumé. At the end of the meeting, each member was asked to prepare that part of the résumé for which his expertness was most appropriate.

During the months following the symposium, each symposium participant selected research studies appropriate to his area and chose clinicians to prepare clinical descriptions and case studies. Reports of research, clinical descriptions, and case studies were assembled by each participant and forwarded to the project director, who prepared a preliminary version of the résumé. The preliminary version then was submitted to the contributors for comments and criticisms. Although each part was the responsibility of a particular person, the entire group was given an opportunity to criticize and offer suggestions. A final version was then prepared. It was nearly impossible to achieve uniformity of style throughout the résumé without dissolving the unique flavor of each writing.

The résumé is addressed to readers from several different professions. An attempt has been made to use terms which are meaningful to various audiences, and to avoid terms which are esoteric to any particular discipline or orientation.

In addition to those immediately concerned with the preparation of this résumé, the editors thank Mrs. Darlene Hunter and Mr. Warren E. George for their generous assistance.

E.T.G.
E.H.S.

August, 1965
Lawrence, Kansas

PARTICIPANTS IN THE PROJECT

Project Director

E. Thayer Gaston, University of Kansas, Lawrence, Kansas

Associate Director

Erwin H. Schneider, Ohio State University, Columbus, Ohio

Participants in the Symposium

Ruth Boxberger, Ohio University, Athens Ohio

Charles Braswell, Loyola University, New Orleans, Louisiana

Vance W. Cotter, University of Kansas, Lawrence, Kansas

E. Thayer Gaston, University of Kansas, Lawrence, Kansas

Richard M. Graham, Lincoln University, Jefferson City, Missouri

Betty Isern, University of the Pacific, Stockton, California

Sister M. Josepha, O.S.F., Alverno College, Milwaukee, Wisconsin

Donald E. Michel, Florida State University, Tallahassee, Florida

Erwin H. Schneider, Ohio State University, Columbus, Ohio

William W. Sears, Indiana University, Bloomington, Indiana

Robert F. Unkefer, Michigan State University, East Lansing, Michigan

Assistants to the Project Director

George L. Duerksen, University of Kansas, Lawrence, Kansas

Mary Jo Johnston, University of Kansas, Lawrence, Kansas

Authors

Juliette Alvin, 48 Lanchester Road, London, England

Carol H. Bitcon, Fairview State Hospital, Costa Mesa, California

John Bixler, University Hospital School, University of Iowa, Iowa City, Iowa

Charles Braswell, Loyola University, New Orleans, Louisiana

Hermina E. Browne, 640 West State Street, 406A, Trenton, New Jersey

Barbara Cavallin, 700 Crest Drive, Topeka, Kansas

H. W. Cavallin, Topeka State Hospital, Topeka, Kansas

Christine Christman, Mendocino State Hospital, Talmage, California

Carol Collins, Western Michigan University, Kalamazoo, Michigan

Paul D. Cotten, 533 West Fourth Street, Hattiesburg, Mississippi

Vance A. Cotter, University of Kansas, Lawrence, Kansas

Carol A. Crigler, Essex County Overbrook Hospital, Cedar Grove, New Jersey

Dorothy Brin Crocker, Shady Brook School, Dallas, Texas

George L. Duerksen, University of Kansas, Lawrence, Kansas

Jo Ann Euper, University of Kansas, Lawrence, Kansas

Geneva Scheihing Folsom, Veterans Administration Hospital, Tuscaloosa, Alabama

Louise Whitbeck Fraser, 4101 Sheridan Avenue South, Minneapolis, Minnesota

Anne Gaffney, Agnews State Hospital, San Jose, California

E. Thayer Gaston, University of Kansas, Lawrence, Kansas

Warren E. George, University of Kansas, Lawrence, Kansas

Ray Glover, Larned State Hospital, Larned, Kansas

Herbert P. Goldsmith, Milledgeville State Hospital, Milledgeville, Georgia

Richard M. Graham, Lincoln University, Jefferson City, Missouri

Richard Gray, Topeka State Hospital, Topeka, Kansas

Neal Helmus, Mary Free Bed Guild Children's Hospital and Orthopedic Center, Grand Rapids, Michigan

Sally Henneman, University of Kansas, Lawrence, Kansas

Frances Korson Herman, 580 Christie Street, Apt. 1110, Toronto, Ontario, Canada

Betty Isern, University of the Pacific, Stockton, California

Sister M. Josepha, O.S.F., Alverno College, Milwaukee, Wisconsin

Yolanda Kozak, Mary Free Bed Children's Hospital and Orthopedic Center, Grand Rapids, Michigan

Wanda Lathom, Parsons State Hospital and Training Center, Parsons, Kansas

Carol Marsh, Central Louisiana State Hospital, Pineville, Louisiana

Donald E. Michel, Florida State University, Tallahassee, Florida

Lucretia Rogers, Gillette Hospital, St. Paul, Minnesota

Barbara Romerhaus, Larue Carter Hospital, Indianapolis, Indiana

Wayne Ruppenthal, Topeka State Hospital, Topeka, Kansas

Erwin H. Schneider, Ohio State University, Columbus, Ohio

Margaret S. Sears, R.R. 7, Upper Flanders, Bloomington, Indiana

William W. Sears, University of Indiana, Bloomington, Indiana

Forrest Slaughter, Minnesota Residential Treatment Center, Circle Pines, Minnesota

Mickie Snively, Mendocino State Hospital, Talmage, California

Dorothy Twente Sommer, 1143 Alice, Davis, California

Harrold W. Spicknall, Lansing Public Schools, Lansing, Michigan

Gerald K. Spry, Milwaukee County Mental Health Center, Wauwatosa, Wisconsin

Myrtle Fish Thompson, Essex County Overbrook Hospital, Cedar Grove, New Jersey

Mary Ryder Toombs, Parsons State Hospital and Training Center, Parsons, Kansas

Florence Tyson, Creative Arts Rehabilitation Center, Inc. (Music Therapy Center), New York City, New York

Robert F. Unkefer, Michigan State University, East Lansing, Michigan

Kay Ewer Wells, 518 South Jenison, Lansing, Michigan

Natalie R. Werbner, Peninsula Children's Center, Menlo Park, California; Stanford Children's Convalescent Hospital, Palo Alto, California

Richard Winklemayer, Marlboro State Hospital, Marlboro, New Jersey

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INTRODUCTION

Music therapy is a behavioral science. Because of this, it has freed itself from mysticism. Music has probably been an activity of man for as long as he has had religion, politics, or any sort of organization. Throughout most of man's history, music and therapeutic process have been inseparable companions. The specific roles of music in the treatment of illness have been related to the beliefs of each civilization. Just as civilization has changed, so have the roles of music and medicine become altered.

Mystic, therapeutic powers have been attributed to music in almost all cultures, even in those that have prided themselves on their rationality. Men have believed that music cures illness by warding off "evil spirits," absolving sins, introducing moral and ethical forces into human lives, placating the gods, affecting the emotions, and balancing the four fluids once supposed to determine the human temperaments.

With the development of scientific methodology, many disciplines gradually abandoned reliance on mystically affirmed beliefs in favor of practices that could be empirically confirmed. Early in the 20th century, medicine accelerated the development of specific treatments. Music in therapy, however, lagged behind, functioning as a general treatment. Music was a soporific that was both "good for the soul" and "a way to make people better." It also kept people busy. Not until World War II was this generic mode of treatment challenged to any extent by psychiatrists and other physicians. These challengers asked music therapists what they could do specifically, outside of the typical "shotgun" method of treatment.

The advent of the phonograph had given new impetus to the use of music in therapeutic settings. Recorded music was used in hospital wards for diversion. In a few instances, music was used in operating rooms to reduce anxiety and as an aid to local analgesia. During World War II, the use of music in hospitals for the purpose of strengthening the morale of wounded servicemen initiated new uses of music in medicine. Music and musical activities were used for entertainment, instruction, recreation, rehabilitation, and specific therapeutic purposes. The use of music in the hospital setting during these years increased, as did the demand for trained hospital musicians.

The challenges of some psychiatrists forced music therapists to examine their procedures and achievements more closely. Other psychiatrists were content, in fact insisted, that music be an activity only. Papers related to the use of music in the therapeutic settings became more prominent on the conference programs of various professional groups, particularly on the programs of music organizations. At special meetings, hospital musicians discussed this field of musical endeavor. A few colleges and universities began developing programs for the training of music therapists.

Examination of practices and accomplishments made it apparent that music therapists needed to know more about man and his responses to music. It became evident that mere performance was not sufficient to put a patient in better condition. No longer was it enough for the music therapist merely to play music for the patients. Music therapists had to pay more attention to the nature of man; they had to learn more about him.

It seemed necessary and proper for music therapists to form a national organization during this examination of their practices and accomplishments. It was obvious that diverse practices prevailed. Few of such practices were founded on verified knowledge of the effects of music on human behavior. There was great need to define and interpret the contributions that music could make in the therapeutic setting. This was one of the major purposes for which the National Association for Music Therapy was organized in 1950.

From its beginning, the Association has been committed to ". . . progressive development of the use of music in medicine, and the advancement of research, interests, and standards in music therapy." These purposes stood in conflict with the somewhat narrow practices of past music therapy. At the annual national and regional meetings held in the early days of the Association, a few of the papers presented seemed almost mystical in nature. Very little experimental evidence describing the influence of music on human behavior was available. Through its research committee, the Association has attempted to encourage scientific investigation of the uses of music in therapy.

The NAMT, by suggesting curricula for music therapy training programs, has been able to draw attention to ways of looking at man other than from the purely musical point of view. When the Association established the curriculum in 1956, it set the standards for training programs. This made it necessary for any institution offering music therapy courses to obtain approval for such instruction through the National Association of Schools of Music. Clinical training centers also were made subject to the approval of the Association. Recognition of persons trained in approved programs was accomplished when such persons were granted registered status on the successful completion of their training programs.

The publications of the Association provide a source of information about music therapy. The early Bulletin of NAMT, the Books of Proceedings, the current Journal of Music Therapy, as well as various brochures developed over the years, made possible the dissemination of information about music therapy. The recent "Abstracts of Research Studies in Music Therapy," by Sears and Sears, and the "Selected Bibliography of Studies in Music Therapy," by Schneider, provide the practitioner and scholar with some of the basic information needed for the refinement of knowledge and techniques.

Today, as music therapy struggles to achieve status as a behavioral science, it is concerned with the observation, evaluation, and prediction of behavior elicited and controlled by specific musical environments in therapeutic settings. There is need for an organized body of knowledge and a set of verifiable hypotheses that will give direction to practice and research.

It is this need that dictates the contents of this volume. The following pages provide a "status report" presenting bases and processes of music therapy, reviews of research into various applications of music, and reports of clinical practices. Much research remains to be done. Some of the clinical practices are still based on the "shotgun" approach, and many specific effects of music remain to be verified. It is hoped that the organized information presented here will stimulate the systematic development of knowledge needed for better practice of music therapy.

--Erwin H. Schneider

PART I

MAN AND MUSIC

E. THAYER GASTON

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MAN AND MUSIC

E. Thayer Gaston

Music Is Human Behavior

Music is human behavior. This short statement provides the thesis not only of this chapter but of those which follow. Very simply, it means that we are concerned primarily with human beings, with the many ways they participate in musical activities, and the many ways they are influenced by music. More specifically, the several authors of this résumé have written of music therapy. Certainly, at all times they have been concerned with music as human behavior, but human behavior always has been their first consideration.

That human behavior known as music has been studied by psychologists, anthropologists, and sociologists. The three disciplines of psychology, anthropology, and sociology are known as behavioral sciences. A behavioral science is one which deals with human action and aims at the establishment of generalizations about man's behavior in society.[1] Although such disciplines as economics, history, political science, and others, are sometimes regarded as behavioral sciences, they are not considered essential to the present discussion.[2]

Behavioral sciences are relatively new, and many matters of immediate concern to man's happiness have been investigated insufficiently. By the admission of some behavioral scientists there is a poverty of data on art.[3] As will be seen later there are very few reports of scientific nature about aesthetics. Most of what makes life worth living--"its warmth, its color, its love and joy"--has been omitted from scientific investigation.[4] Knowledge of acoustics is a poor substitute for experience of color and tone. Nevertheless, man's musical behavior, and particularly the therapeutic use of music, must be studied scientifically. The best method for this is the method of behavioral science. Because we know very little of the processing of musical stimuli by the human organism, we must observe and study overt behavior.

However, to study behavior exclusively on the basis of "externally placed guidelines" is not the best procedure. "Behavioral science has, up to now, been overly concerned with [these] externally placed guides on behavior. Lip service to organismic states has been rendered. . . ."[5]

It is true that behavioral science has at times been so pessimistic about learning of the inner functions of the human organism that, to all appearances, it has despaired and made little or no attempt to gain any data except the behavioral. This is, of course, a mistake, because no single scientific approach will explain man or his behavior. "The mind is a comprehensive feature of man. . . . A comprehensive entity is something else than its particulars known focally, in themselves. Behaviourism, which suggests that these particulars should be studied in themselves, is totally impracticable."[6]

Many behavioral scientists have never been content with the single approach. Neal Elgar Miller was awarded the National Medal of Science "for sustained and imaginative research on principles of learning and motivation and illuminating analysis of the effects of direct electrical stimulation of the brain." In the conclusion of his presidential address to the American Psychological Association, Miller said, "A combination of behavioral and physiological techniques is increasing our knowledge of these [brain] processes and their significance to psychology."[7] And Bakan has said that ". . . to keep the nature of the psyche a mystery and [yet to] master [understand] human behavior--are incompatible with each other."[8] Murphy has gone to great length and detail to show the potential contributions of many disciplines, including genetics, biochemistry, neurology, embryology, and others, to the future development of psychology.[9]

There is yet another reason why the understanding of human behavior and, specifically, music therapy must have a multidisciplined approach. Scott mentions "all branches of zoology" and interdisciplinary study involving psychology, sociology, and the physical sciences in speaking of the broadness of the study of animal behavior, which includes human behavior.[10] "All problems of life ultimately are biological ones, and . . . they should be explored not for themselves alone but for the suggestions they may offer for the complex phenomena of life."[11] Ostwald cogently has made clear the great importance of acoustics for anyone interested in the importance of human sounds as communication of emotions.[12] Masserman, writing of "a comprehensive *biodynamic* theory of behavior," says that the theory should "be in accord with biologic principles as inferred from the evolution and the structure and physiologic relationships of living organisms."[13] Allport, describing the development of personality, says "that nothing in personality is purely 'social' and nothing purely 'individual.' . . . Both approaches are valid. And for a complete account of human action (which no single science yet attempts) we need them both."[14]

Thus far we have attempted to show that music therapy is a broadly conceived behavioral science, albeit a very young science and therefore lacking in tradition, needing more data, and needing better methods of securing more data. We have also emphasized that some knowledge of several other disciplines is essential in order to understand human behavior. The fullness and richness of concept and insight which are necessary to music therapy cannot be gained unless we have at least background knowledge of other approaches to the nature and meaning of man's production of, and participation in, music.

Briefly and perhaps bluntly stated, we dare not proceed with music therapy unless we rely on the findings of other disciplines. We must have acquaintance with at least the essentials of such disciplines as anthropology, psychology, sociology, physiology, and acoustics, as well as knowledge of the art of music with its history and function. Music therapy, as every behavioral science, should be buttressed at each strategic point with whatever will be helpful from other sciences and fields of knowledge. This is not weakness or dependency; it is the way toward strength and confidence. This is a certain course toward gaining the esteem of those with whom we work.

The purpose of this discourse is not criticism. Rather, it is encouragement, encouragement for the music therapist to be steeped in the knowledge so pertinent to wisdom in music therapy. The attainment of this knowledge is not limited to the content of the four years of study leading to a degree, important as that is. The goal is an attitude, an approach to professional life. "The ultimate goal of the educational system is to shift to the individual the burden of pursuing his own education."[15] It has been estimated that knowledge will double every 10 to 15 years. Music therapists cannot afford to fail to keep up.

There is a second reason for encouraging attainment of pertinent knowledge. All music therapists have begun, and future therapists will begin, their music study long before they even consider music therapy as a profession. Now music is an extremely jealous and proprietory mistress. This is as it should be, because there is rarely a good music therapist who is not a good musician, and since it takes years to become a musician, one cannot wait until college to begin the study of music with any hope of becoming adequate. But during the years of music study, several unfortunate influences and ideas too often become a part of the credos of many students. One idea, all too prevalent, is that science, mathematics, and other liberal arts contribute nothing beneficial to a musician. This belief sometimes is held openly or tacitly by those who are influential in the musical development of the student. Of course, this belief is not true. A cursory study of ancient Greece or of the Renaissance, to name only two examples, will show that general knowledge is no handicap to artistic endeavor, but, on the contrary, enriches it.

Lack of belief in the merits of a broad education is frequently accompanied by a second unfortunate influence, the belief on the part of the music student that he cannot be successful in scientific study. And often the student is not adequately successful in studies other than music--not because he cannot be successful, but because he _believes_ he cannot be successful. There is no real conflict between the arts and science, nor between the behavioral and the exact sciences. The conflict is in the attitude toward them. _All truth is compatible, not conflictual_. Scientific investigation will not in any way negate the influence of music on behavior. Merton has said that "even when . . . a behavioral scientist elects to understand, so far as he can, the processes through which creativity and cultural growth come about, he does not rob that creativity and growth of its own character."[16] The relationship between science and art has had much discussion during the past decade. It has been discussed elsewhere in reference to music therapy.[17]

Recognizing the necessity of a broad education for music therapists, the National Institute of Mental Health has made possible, through a grant, a five-year research project now in progress.[18] This project, directly concerned with broadening the training of music therapists, requires the student to spend one semester and one summer session in graduate study and one semester in advanced clinical training. This study has been described in greater detail elsewhere.[19]

Because music is an art, its meaning and function have been until recently in the province of philosophical aesthetics. Aesthetics was rather exclusively the domain of philosophy for centuries, and the centrality of philosophical aesthetics was theory. But no longer is aesthetics exclusively within the province of philosophy. The definition found in _Webster's Third New International Dictionary_ best describes the modern situation:

"Aesthetics, the science whose subject matter is the description and explanation of the arts, artistic phenomena, and aesthetic experience, and includes psychology, sociology, ethnology . . . and essentially related aspects." Thus, the contemporary concept of aesthetics will remove it from many of the seeming contradictions of philosophical aesthetics, which are completely theoretical and sometimes nonapplicable. Music therapy will be much better if it looks first to the behavioral and several of the biological sciences and then, perhaps, to philosophy. For too long outdated, speculative, philosophical theories have influenced our thinking.

Although we must be familiar with closely related sciences, no single scientific discipline can describe adequately the phenomena of music therapy. We ignore possible sources of information if we attempt to follow exclusively one particular sociological, anthropological, or psychological theory. We must continue to develop a systematic approach appropriate to the phenomena of music in therapy.

> Unlike religious and philosophical explanations, however, a scientific explanation does not pretend to be all-embracing, universal, and eternal. Unlike a religious explanation, it does not demand unquestioning faith. Rather, in each and every detail, scientific explanation remains permanently open to question, to reassessment, revaluation, or reversal in the light of later discoveries of data or better research methods.[20]

The Development of Man

"Man is the most mysterious of all experiences. This is why art and science strive to make him comprehensible."[21] "Man has both a nature and a 'history.'"[22] Perhaps there is no better way to have a fresh viewpoint of man than to consider his development, even though the consideration is brief. It seems certain that we cannot understand man and his behavior well unless we know how he became what he is. To understand human behavior better, even in small amount, is to have a more complete knowledge of music therapy. "Always in biology . . . a full explanation involves a historical--that is, an evolutionary--factor."[23] "Man is part of the cosmos and subject to all of its laws. He is a biological unit and operates always in agreement with the principles of biology. Human nature is the result of the interaction of what is in man _in all of its complex functioning_, and what is outside of him."[24]

There is only one species of man, and we all belong to it. We not only have evolved, but are still evolving. "By changing what he knows about the world man changes the world that he knows; and by changing the world in which he lives man changes himself."[25] Basically, all body function is that of chemistry and physics. We live in a universe, not a "diverse" (situation). The earth, seas, plants, animals, and man (an animal) all share the same building materials, the elements, molecules, and atoms. *All that lives is our kin*. The basic mechanisms of reproduction and heredity are the common property of all plants and animals. Genes and chromosomes appear in sunflowers, roses, cacti, fish, reptiles, birds, and mammals.

Some pains have been taken here to show the physical basis of all living things so that we do not slip through the side door labeled mysticism. *Music is not mystical; it is mysterious*. We do not yet know fully why music is beautiful. The causes of its beauty have not been proven. But this is no reason to consider music otherworldly. To do so is as erroneous as to ascribe behavioral disorders to the infiltration of evil spirits.

Life has been on this earth a few billion years, but we shall be concerned with history beginning with that prehuman primate which lived over a million years ago.[26] Crude tools have been found, and evidence indicates that Zinjanthropus (an early progenitor of man) used them in Eastern Africa about 1,700,000 years ago. Although such items pique our curiosity we are chiefly interested in how this progenitor of man developed the characteristics of humanness which set man apart from all other animals. The fact that Washburn has said, "In a very real sense, tools created *Homo Sapiens*,"[27] indicates that a separation of the culture and biology of man is not necessary. "The fact which must be stressed, because it has frequently been missed or misrepresented, is that the biological and cultural evolutions are parts of the same natural process."[28] The evolution of the capacity for culture is, in fact, the evolution of the human stock."[29]

One of the essential conditions for the organization of men into cooperative societies is the suppression of hostility. The development of the cortex in sufficient extent to exert some control over the autonomic system has been recounted by Washburn[30] and by Etkin.[31] Only in the primate family is the female receptive to the male from one oestrus to another. Therefore she attracts and holds the male, forming a biological basis for the formation of family relationships of long duration.

Thus we see a long step taken from other animals. No longer is the female periodically forced into blind, instinctive behavior. And the cortical, so to speak, becomes dominant over what has been called the endocrine factor. Now sexual dimorphism (difference and size) becomes more apparent. Division of labor occurs. The relationship between male and female modifies aggressive behavior and results in increased communication. All of this, it seems, leads to the mother-child relationship, unique among all animals.

The central nervous system of an ape or a monkey is better developed at birth than is that of the human baby. At birth the lower primates are able to cling to the mother. In spite of its increased brain size, the human baby is far more helpless at birth than any other neonate. It is highly dependent for a long period of time on the mother, whose mate now provides the necessary protection and food. And because of their genes, "no primates produce litters, although a few species habitually have twins."[32] Primates, therefore, can give more attention to their young. The mother has time to care for and teach her child, and the child has time to learn. This relationship establishes the early stages of cultural development. The deleterious effect of the breakup or disturbance of the mother-child relationship, even in monkeys, has been clearly shown in studies by Harlow.[33] "And yet it is this helplessness and prolonged dependence on the ministrations of the parents and other persons that favors in man the socialization and learning process on which the transmission of culture wholly depends."[34]

These few illustrations show that culture has always evolved toward greater interdependence of individuals, toward more communication, and toward those close relationships which are characteristic of culture. Genetic changes also have occurred continuously. These changes have produced the most distinguishing characteristic of man, his brain, and in particular, his cerebrum. "Progressive evolution of behavior in the animal world has led to the interposing of more and more nervous processes between the stimuli arriving from the environment and the organism's responses to them."[35] "The development of the brain to its present size and complexity in man is a prodigious evolutionary feat. It represents a sensitivity to the environment unique in the animal kingdom."[36] "Freedom to react to the environment is in its highest degree a social affair."[37]

The two most distinguishing characteristics of man's development are his social organization and the immense complex of approximately 12 to 13 billion cells, his brain, which makes possible speech, communication, abstract thinking, and, as will be shown, significant nonverbal communication in the form of music.

Man and His Senses: Music

"Einstein said something that needed to be said and that has been said better by nobody else: 'The most incomprehensible thing about the world is that it is comprehensible.'"[38] Without comprehensibility of the outside world there would be no music. "The outside world--the world perceived by the senses--is the source of all that a form of life is and does, thinks and feels."[39] The key word in this assertion is the word "source." In spite of the great potentiality of the newborn, it is doomed to isolation without sensory stimulation. It is clear that we are dependent on our senses for even the most primary information from our environment. "There is just one organ which can accept instruction from the environment: the brain."[40] "A survey of the entire scale of evolution justifies the statement that the more the mechanism of the sense organ of a form of life has developed, the richer is the outside world of that particular organism."[41] Man has a much wider choice of action than other animals because his sense organs, and brain, enable him to distinguish so many more details--in other words, his world is incomparably richer.[42]

The end organs of our senses, of hearing, seeing, touching, smelling, and tasting, are all differentiated skin. They develop from the ectoderm of the embryo. Each sense brings its own particular quality of reality to us. No one can say that auditory stimuli are less real than other sensory stimuli. Our senses provide us with the basic material of what is to be our intelligence and certainly of what is to be our aesthetic consciousness. "Intelligence does not develop in a monotonous, or perceptually isolated, condition. . . . The mammal reared with restricted access to his normal sensory environment lacks intelligence in proportion to the degree of restriction and shows disturbances of motivation (or of 'personality') to match."[43]

A number of experiments which deprived young animals of adequate sensory stimuli permanently stunted the development of their intelligence. Not only is there behavioral evidence of damage but anatomical and chemical evidence as well. Weiskrantz[44] found damage to sight, and Liberman[45] found alterations in ribonucleic acid (RNA). A deprivation of sensory stimuli not only can permanently damage the young, but also can make the human adult behave abnormally, losing his sense of self and even having hallucinations.[46]

Prolonged immobilization of the body dramatically alters the electroencephalogram.[47] There must be an adequate amount of sensory stimuli for health and normality to prevail.

This basic need of the organism for sensory stimuli makes evident why children must have a rich sensory environment. For healthy existence, adults, likewise, need a varied inflow of sensory stimuli.

As we follow the development of man and his organization of experience, the place of music, as a necessity, in all cultures, will become clear. "*All mankind must organize*, must seek causes and endings. In a multitude of religions and philosophies, man explains how things came to be and how they will be. There are no races, tribes, or peoples who cannot do this. And each individual of every race, tribe, and people began this process of abstraction by receiving sensory stimuli . . ."[48] Pribram, discussing the consequences of action becoming orderly, says "the suggestion is that reinforcement is the expression of an organism's tendency toward orderliness; that satisfaction results when a degree of orderliness has been achieved."[49] "The extreme sensitivity to interpersonal environment seen in primates is carried over onto the human level. . . . 'Status' and 'role' assume a central place in sociology because they describe what is most necessary for behavior; namely, *an ordered simplification of the human environment*."[50] There can be little understanding without orderliness and organization. The key to the process of life is organization. "Whatever else personality may be, it is the crowning example of the principle of expanding organization."[51]

Great emphasis has been placed upon this universal demand for organization in mankind of every culture and time, because it provides a necessary insight into the propensity and demand of human beings for music. To the child, sights, sounds, shapes, textures, and rhythm are entrancing. They are "sense hungers" that supply the sense stimuli necessary for normal growth and enrichment. The impulses to see, to hear, to taste, and to smell are as natural and as demanding as the desire to understand. "Human nature, as directly observed, is no matter of the viscera alone. It is a matter of exploring the possibility of surfaces, lines, colors, and tones--and, later on, the symphonies, mountains, and stars."[52]

Man, with his cerebrum of billions of cells, must not only arrange his environment into a system of constructs--a prearranged design for living--but he must create. No culture, no tribe has ever been satisfied with only the sounds of nature. Man has made new sounds and has placed them in a construct or system which is generally and predominantly rhythmical, and sometimes melodic or harmonic. Each child born into a culture must learn the music of that culture. His music is a folkway. It is human behavior and, as has been said before, is not mystical nor transcendental. Murphy has explained this phenomenon as well or better than anyone else.

> There is, however, no group of human beings which has not cultivated devices for enriching contact with the sensory world. . . . The word ordinarily used to describe this class of satisfactions . . . is *esthetic*. . . . The *potentials for becoming a human being*, as compared with a less complex kind of animal, *lie largely in this enrichment and elaboration of the sensory and motor ranges of experience* . . .[53]

Man cannot escape the formulation of aesthetic constructs. The great potential of his nervous system takes him beyond bare animal adaptation. And *aesthetic experience may be one of the best devices to enable him to adjust to his environment*. The chief significance of aesthetic experience, however, is that man would be less complete as a human being without it. And *it is toward this humanness that our discourse moves*. Music is of the essence of humanness not only because man creates it, but also because he creates his relationship to it. In the matter of music, nature does not know best, unless we consider the part of nature that is man. *As far as music is concerned, man knows best*.

"Growing plasticity of response characterizes the evolution of vertebrates, of mammals from reptiles, of primates among the mammals, and of man from his primate ancestors."[54] The ability to communicate meaning through language is a characteristic of all cultures, and is an absolute necessity because of the interdependence of individuals. All peoples have the potential for language, yet each develops its own. Hulse says "no language can be called a better instrument for communication than any other language."[55]

No one language is any more difficult than another. Every normal child learns to speak his language with ease. Long ago the selection of genes determined this. There are many different musics, but each fulfills its proper functions in its own culture.

Although this discussion will say more about the ubiquity of music and the various ways in which the human potential for music is fulfilled, the main purpose is to lay a foundation for music therapy. Such preparation for understanding the type of human behavior which we know as music seems essential as a basis for the details of research and clinical practice. Music is not an artificial or mystical act, but an essential function of man which now influences his behavior and condition and has done so for thousands of years.

In the beginning of this chapter, special consideration was given to the necessity of a multidisciplined background for a full understanding of music therapy. The more opportunity there is for checking and verifying with other sciences, the less chance there is for error, and the greater is the certainty of worthwhileness and value of effort. To illustrate this, and to present basic information, attention is drawn to certain neurological data. This data has to do primarily with rhythm, but just as surely it seems, with monotony, familiarity, excessive novelty, organization, and, of course, with attention. All of these are basic to many activities in music therapy. Pribram[56] recounts the response of human subjects to the temporally irregular "beeping" of a tone. At first, there is full evidence of the alerting of the subject: turning of the head and eyes to locate the tone, galvanic skin response, increased blood flow to the head. Electrical activity to the parts of the brain connected to the internal ear show a "choppy" pattern characteristic of alerting, and other parts of the brain give altered electrical records. After five to ten minutes this pattern changes because of the repetitious environment. The person apparently no longer reacts to the situation. However, if the length of the "beeped" tone is altered, all of the previous indications of alerting appear. "Any slight departure from prior conformations--any nuances--produce the orienting reaction. . . . [Thus,] reaction to novelty appears to be one built-in feature of the central nervous system."[57]

Pribram indicates that "*novelty arises out of variations on the familiar*."[58] Extreme repetitiousness leads to internal inhibition, to drowsiness. If too much novelty is presented (in which there is not enough of the familiar) the result will be the same--inhibition and lack of attention. Although Pribram is chiefly concerned with learning and habituation, his findings are applicable to music therapy. We learn to pay attention best (and learn best) when there is the right admixture of the novel and the familiar. Pribram points out that "the construction of a great symphony follows familiar lines: the rules of themes and subthemes, beat and counterpoint, form and movement, must all be thoroughly mastered before creative composition can begin. Beethoven created music by taking discipline even farther than its already complex structured limits."[59]

A more elaborate and detailed account of the "beeping" tone experiment has been reported in another place by Pribram.[60] Here he was concerned with the biochemical as well as the neurological aspects of memory. He referred to pathological states, but he made the same point that the correct proportion of variation on the familiar is necessary for the best attention. We are convinced of the influence of novelty by observation of changes in fashion, changes in dance, and by changes in entertainment. Dember[61] suggests that close study of changes (novelty) may help us to understand aesthetics. Is it variation from the repetitious which is a fundamental part of the phenomenon of music? The results of the lack of variation are shown in the next section, which examines the musics of different peoples.

The statement may be ventured that any normal mother can easily put to sleep the neonate of any other mother. Lullabies are strikingly alike the world over. Nearly always there is metronomic regularity. The chief characteristic of lullabies is the regular, monotonous "rocking" rhythm. Perhaps this derives from the sound and movement in the environment of prenatal life, or, in postnatal life, from the parsimony of physical movement of the mother. However one explains it, the rhythm is metronomic and universal, although tempo may vary greatly.

It would be fatuous indeed to maintain that the explanation of music is this simple--it is not. As von Buddenbrock has said, "this remarkable relationship between the physics of stimulus and sensory pleasure has not yet been scientifically explained."[62] It is notable, nevertheless, that most music of preliterate people, the music of children, and the dance music of adolescents are strikingly similar in regularity to the rhythms of prenatal and infant life. The first big money-making recording of rock (note the use of the word "rock") 'n' roll was "Rock Around the Clock." In fact, most individuals in Western culture must study music for some time before they really enjoy music with a non-metronomic pulse. One has only to read the work of Magoun[63] to realize that there are no simple answers.[64] Such an excellent work may not give all, or even many, of the answers, but it strongly discourages belief in some answers that are wrong. We must seek our answers in man's behavior.

Man's Behavior with His Music

In spite of our ignorance of internal processes, we can observe from man's behavior that music is very potent, and that it holds a very special place in his life. Hulse (The Human Species) in Chapter One, "What Is Man," under the rubric, "The Uniqueness of Man," begins by describing the grave of a Neanderthal boy. He tells how the body was arranged in a grave which was lined with wild goat horns, and then, in proper and significant commentary, says "perhaps the people sang or wept or recited charms while they were disposing of his body. We cannot know. But it is clear that they felt the need to do something special."[65] The point is that no apologist for music or music therapy wrote this, but, rather, a physical anthropologist, assuring his readers of the humanness of Neanderthal man. Certainly sound is the most important mode of expression of emotion in man, and music is formal sound.

"Aztec music--indeed all of American music--was tied up with dancing; any 'pure' music has disappeared."[66] This refers, of course, to American Indian music. All Aztec instruments were percussion instruments--different-sized drums--except the conch shell. Their "music was rhythmic, not melodic; its outward effect was cadence to the dancer, its inward effect, hypnotic."[67] "Dance was as inseparable from music as was singing or rhythmic stress."[68] There were mass and group dances. "The dance had but one function; to obtain aid from the unseen powers. . . ."[69] The reason for the dance (and music) was to enable both the dancers and the watchers to obtain "mystic communion" with the proper god. "Drumming was of supreme importance; it soothed the soul . . . and exerted a real mystical influence."[70] From the "mystic point of view the drum was an indispensable part of the magico-propitiatory apparatus."[71]

In the short account of Aztec music, just related, there are important ideas that should be examined. Many of them can be seen in every culture. The first of these is the union of the dance with music. First, let us remember that of all the animals, man is the best all-around athlete.[72] Bowra is careful to make clear the priority of dance over song. "The priority of dance over song is clear from the large number of dances which have no words and are entirely self-sufficient and self-explanatory without them. The dance is one of man's earliest attempts to move in an imaginary world of his own creation . . ."[73] According to Bowra, song is derived from the dance and came into existence after the dance. Song is a more conscious art. Bowra may or may not represent a minority opinion in the priority of dance over song.

Rhythm was the most influential element in Aztec music. Repetitive, monotonous music was accompanied by repetitive dance movements. The result was "hypnotic." We are reminded of the lullaby, the "beeping" tone which resulted in inattention, and the rock 'n' roll of monotonous beat and movement. When all cultures of man are considered, it is rhythm that seems most fundamental. It is rhythm that crosses most easily and understandably from one culture to another.

Graham has shown that if tempo and rhythmic pattern are kept constant, very anxious and fearful patients will be much more apt to join in group rhythms whereas they will not if the rhythm and tempo are often changed.[74] A similar result may be observed in the large number of dancers that leave the dance floor when tempo and rhythm are changed notably.

Both music and dance in Aztec culture were performed by groups and not by soloists. This usually is true in our own society. One of the most important functions of group music is to bring the individual to full membership in the group, to make him feel accepted. This is one purpose of congregational singing in churches, singing in service clubs, and singing in convocations. When a person takes part in group music he is taking an active part on his own behalf as well as on behalf of the group.

The major function of the music and the dance of the Aztecs was religious. The union of music with ritual is nearly universal. In his description of healing ceremonies conducted by a shaman, Frank[75] speaks of the strong aesthetic appeal of ritual, particularly when accompanied by rhythmic music, chanting or dancing. Hamilton, writing of Greek mythology, says that "the very earliest musicians were the gods."[76] The one time in America when more group music occurs than at any other time is probably on Sunday morning during church services. The function of much music is cohesion and integration of the group.

A final observation by von Hagen concerning the Aztecs is of particular importance. "Song, music, rhythm . . . were used, as they always have been, for memory."[77] This seems to be a universal function of rhythm in all cultures. Bowra, speaking of paleolithic man and the beginnings of song as he has found them in present-day primitive society, says that primitive people "reveal what human beings, living in the most elementary conditions, do to make words rhythmical and memorable . . ."[78] It is rhythm that holds music to specification in time. We ordinarily remember melodies longer than we do the words of these melodies. Nevertheless, we remember words longer when they are patterned to the rhythm of a melody than when they are not. The importance of rhythm to the memory of words is demonstrated daily in our own lives by the use of jingles for advertising.

Mayan music was group music, also, and the drum was important, although the Mayans used melody-making instruments.[79] Again we are reminded that "drums gave the group a hypnotic feeling of oneness."[80] This seems to be a universal effect of repetitive percussion. Certainly the same effect is observable in our own society. The feeling of "oneness" is of much value in many situations where social solidarity and cohesion are desirable.

To the Mayans, music was so sacred that especial care was used in taking care of the instruments. Rhythm was so important that those who did not keep time were punished. Particularly important is von Hagen's statement that "dance /music/ was a mystical communion between participants and the onlookers."[81] Music is nonverbal communication of such a special quality that most people have thought it to be mystical and supernatural. We know, as far as science can know with its present devices, that music is not mystical nor supernatural, but that its powerful effects are still mysterious.

The music of the Incas was performed on percussion and wind instruments. Again, in this society the same phenomena of group music occurred. "The flow that separates civilized man from uncivilized man is a rivulet that any child can, and does, step over."[82]

Music is shaped by culture, but in turn, influences that culture of which it is a part. "Thus, all music is patterned behavior . . ."[83] It must be agreed upon by the members of its society. "Music is a uniquely human phenomenon which exists only in terms of social interaction . . ."[84] Thus, we shall expect to find differences between the musics of different cultures, although the uses of music will not be greatly different. The effects of music cannot be predicted if the music is completely strange to the listener.

An excellent account of the many functions of a Cheyenne medicine man, his uses of music, and his vital role in a band of escaping Indians, has been narrated by Sandoz.[85] A detailed and exceedingly well-prepared work on the day-to-day life of the Pawnee Indian is The Lost Universe by Weltfish.[86] In this book, ten chapters are devoted to music and dance, the preparation and performance of the "Grand Opera."

The few cultures mentioned are only a sparse sample, but they do indicate some major functions and uses of music. The most comprehensive and detailed of the books written on this topic is The Anthropology of Music by Merriam. We will know our own music best by knowing also the music of other cultures. Our insight into the use of music in therapy will be greater if we are acquainted with the uses of music in many cultures. Likewise, we will understand the function of music better if we observe its effect on the healthy as well as on the ill.[87]

This chapter has been concerned with the background of music therapy as a behavioral science, with some knowledge of the development of man and his aesthetic sensitivity, and with a short review of music in several cultural settings. There are fundamental considerations of man in relation to music. Knowledge of these considerations is fundamental to the understanding of the processes of music therapy. The remainder of this chapter will be devoted to a discussion of these considerations.

1. All mankind has a need for aesthetic expression and experience.

Masserman has said that "all organisms are actuated by their physiologic needs, including those leading to esthetic expression."[88] "Sensitivity to beauty and making or doing things that are perceived as 'beautiful' are among the traits that elevate man above the brutes."[89] ". . . needs for some sort of aesthetic expression . . . seem universal, and each of the various cultural lines has developed its own solutions . . ."[90] "Music is . . . a universal human phenomenon. . . . The ultimate interest of man is man himself, and music is part of what he does and part of what he studies about himself."[91] Everyone can take part in some kind of music.

2. The cultural matrix determines the mode of expression.

Linton[92] has pointed out that each cultural group develops its own mode of expression. Just as each culture or ethnic group develops its own language, so does each culture or ethnic group develop its own music. Certainly each person must learn the music of his own culture. "Man must learn to be human, otherwise he can never play the role."[93] Music from one culture often makes little sense and has little meaning for an individual or group from another culture. Morey submitted music of Schubert, Davies, Handel, and Wagner to learn the reactions of native West Africans to musical expressions of Western emotions.[94] The results of the experiment follow: (1) Western music is not recognized by the Loma of Liberia as expressing emotion. (2) Music, said to express emotion to an expert in music and emotion in Western society, does not express emotion to listeners whose musical and social training is different.[95] In our own culture, many persons cannot understand or tolerate current dance music, and millions more cannot understand or tolerate "classical" music. If we want to reach people, we must employ music which is understood, at least to some extent.

3. Music and religion are integrally related.

One of the clearest and most evident uses of music is the strikingly widespread coincidence of music and religion. This is not only common in Western culture but Masserman has written in some detail of it as an "Ur-defense."[96] Music helps man to transcend material processes. Music is often an accompaniment of the magico-religious. It is likewise a dynamic of most secular rituals. Perhaps it is the peculiar quality of music that seems to make it a fit means to reach or influence that which is thought to be supernatural.

4. Music is communication.

Music not only is communication but more often than not it is, or functions as, non-verbal communication. In reality, it is the wordless meaning of music that gives it potency and value. There would probably be no music and no need for it if it were possible to communicate verbally that which is easily communicated musically.[97] "On a simple level, it can perhaps be said that music communicates within a given music community, but if this is true, it is equally true that there is little understanding of how this communication is carried on."[98] It should be made clear that while the experiencing and observation of the communicative potential of music in this culture is an everyday event in our lives, we know little about the communication of music in other cultures.

Herskovits has illustrated the puzzling nature of the music of other cultures: "African music, to the casual foreign observers, is no less baffling than any other musical idiom with which the listener is unfamiliar. . . . What later came to be accepted as a disciplined intricacy of rhythm was regarded as mere noise . . ."[99]

"Thus therapeutic communication remains a mixture of observable facts, reportable experiences, and non-reportable emotions. Art, craft, and science are combined to help the individual maintain his own identity and sanity against the pressures of mass communication and the collective state."[100] There is a great deal of nonverbal communication in our everyday and special-day life. Early man probably did not use much verbal communication. Even today some of our most valued and most functional communications are nonverbal, and will remain so because they cannot be verbalized. There is little doubt that much of the familiar music of our experience is nonverbal music of the most potent sort. Whether the achievement of communication is through symbolism, association, or whatever, is not our present problem, although it is a closely related problem.

5. Music is derived from the tender emotions.

Earlier in this chapter it was seen that man's cultural and genetic development, always synchronized, brought him into more and more interpersonal relationships, until they became second to no other influence in his life. "A person becomes related to himself only as he becomes related to the group. Human function is achieved because of the group."[101] The vast majority of all music is concerned with the positive relationships which draw man closer to his fellowman: love, loyalty, patriotism, and religion, to name a few. Consider popular music, folk songs, religious music, art songs, opera, patriotic music, and other musics. Nearly all of them have to do with love in one form or another.

Dobzhansky seems to be referring both to communication and to the better cohesion of the group when he says, "Successful domination of the medium [music] is a satisfying experience not to the artist alone but to his audience as well. This latter fact makes artistic activity a source of social cohesion, and the adaptive value of cohesion in human societies can hardly be overestimated."[102] Among the media for group communication and activity employed in classical therapy, Masserman lists "music, giving opportunity for feelings of conjoint rhythm and harmony, affective expression, group belongingness and other social consumatory experiences."[103]

Music involves the individual in such a unique way that "closeness" is felt, and thus, painful "aloneness" may be alleviated to some extent. "The individual in society at once feels very close to and very far from other human beings, but always there remains the strongest of desires, to be related to one's fellow man."[104] Cohesion of and integration into the group, alleviation of "aloneness," and the right amount of nonthreatening "closeness" furnish much of the motivation for group singing such as that done in church, service clubs, convocations, and similar situations in our own culture. It is not the beauty of the singing that is important in most of these cases, although gratification resulting from singing may be a strong motivational factor. In our culture, at least, *music is nearly always an expression of good will and is so interpreted*.

6. *Music is structured reality*.

Only to the unknowing and the uninitiated does music seem to be unstructured. From the example of the Mayan Indian musician who was severely punished when he broke rhythm to the example of the member of a school band who must and can distinguish discrepancies in accuracy of time as small as an eighth of a second, there is little question of the presence of structure in music. Melodic pattern, pitch, tempo, rhythm, and dynamics all demand a preciseness that is astounding when carefully considered. Certainly the sense of hearing brings us reality as do the other senses. Perhaps, because of the ephemeral quality of music, we may be prone to forget the very real structure of music, a structure that may even be indicated by a "figured bass." Music is an important part of the reality of man and contributes to his sensitivity and humanness.

7. *Music is a source of gratification*.

The performance of music generally brings to the musician an intimate sense of gratification. Such gratification brings a feeling of mastery and security. This gratification comes, in most cases, from a noncompetitive situation. Music is an activity or accomplishment which has order and predictability, both for the performer and for the listener. Both may be benefitted equally. Allport has written of the child seeking *competence* in a number of areas. "*When we come to adulthood we need the concept of competence as much as in childhood*."105

Becker106 believes that "anxiety" is the prime mover of human behavior. However, "self-esteem" is the best protection against undue anxiety. Whatever terms one wishes to use, we cannot forget the feelings of worth, of competence, of gratification, which have followed mastery in performance. We cannot forget the thrill of the listener when there has been a successful performance. The part one plays may be large or small, easy or difficult; *music provides an ecstasy uniquely its own*. This is a major reason whey we are so much more moved in the presence of live music than when listening to recordings. Music permits each person to participate dynamically in his own growth or change.

8. Music is often group activity.

Enough has been written to show that music is predominantly a group activity. It provides a Gestalt of sensory, motor, emotional, and social components. Music nearly always persuades in the direction of custom. Thus, customary group behaviors make verbal commands unnecessary. Group morale and the distinctive valence of music become dominant factors. It is group music, rather than individual music, which is generally most potent and most moving.

In all the widespread and diversified uses of music, never once are any laws of nature abrogated. Music and its influences are phenomena, and, therefore, may be studied scientifically. Music is an art, but music therapy is a behavioral science. As Hulse has suggested, "culture is not only our creation but our creator."[107]

At the present time in our world, books are indispensable, not only for enjoyment, but for knowledge. Without adequate, multidisciplinary knowledge, we restrict our vision to the one, old construct of greatest familiarity. "There is much yet to be discovered in us, in our behavior towards one another, and in our group activities. Sounds that we make while alone and together, what these mean, and how they are used for emotional communication is but one fruitful area for scientific pursuit."[108] Our two best hopes for personal growth and happiness are the strength of our positive interpersonal relationships, and our love for, and increase of, knowledge.

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PART II

PROCESSES IN MUSIC THERAPY

WILLIAM W. SEARS

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PROCESSES IN MUSIC THERAPY

William W. Sears

Music therapy is a behavioral science in that it is concerned with musically elicited behavior in therapeutic situations. Because music therapy is a very young discipline, much of its data and knowledge has been obtained through empirical observation, and sometimes the data is not as factual and well organized as it should be. Nevertheless, modern music therapy seeks to establish itself upon acceptable scientific observation.

To label music therapy a behavioral science should not be thought presumptuous. Such a label describes an orientation and method of approach to verified knowledge; it does not declare that all, or even most, is known. The scientific approach does not negate the presently mysterious beauty of music. When this beauty is gone there is no reason for music. Because of the nature of man, organization, classification, and description are sought until a system emerges. This is the case in all sciences, and music therapy is no exception. To present such a system, even if incomplete, is the purpose of this writing. It will classify and describe processes in music therapy. The system may be characterized as behavioral, logical, and psychological.

Specific discussion of the therapist in music therapy has been omitted, although his presence is implied. This does not mean that the role of the therapist is not important. A therapist is a common factor in most therapeutic situations. His adequacy as a therapist, in the broad sense, is, of course, related to successful therapy. The intent, here, is to help him be more proficient as a _music_ therapist by giving him a better theoretical understanding of the function of _music_ in therapy. Further, the intention of this discussion of processes in music therapy is not to "tell" the music therapist "what to do." "What to do" is left to the therapist, and is to be based on his _understanding_ of theory and practice necessary to achieve the goals of treatment.

No attempt has been made to describe how music, or music therapists, may be used in combination with other therapeutic approaches. This does not imply that music therapy is considered a "cure-all," or that it cannot be used with other media. It signifies only that consideration of combined therapeutic approaches is beyond the scope of this discussion.

Of most importance in any therapeutic situation is the person receiving therapy. Only through the individual's behavior, and changes therein, may the success of a therapeutic endeavor be seen. Thus, behavioral descriptions, insofar as possible, should receive major consideration. The terms are defined and used in a logical and consistent manner. This should permit better communication among individuals concerned. Finally, the classifications and descriptions are consistent with pertinent and accepted psychological principles and theories. No attempt has been made, however, to express the classifications and descriptions in the terminology of any particular psychiatric or psychotherapeutic school of thought. Rather, a definite attempt has been made to express them free of such connections, to express them as specifics properly a part of music therapy. This has been done, not to create the impression of a new school of thought, nor to claim any special status for music therapy, but to permit the fitting of what music therapy has to offer into various orientations.

Classification, as used here, signifies a general idea, a broad concept or category, concerning the use of music in therapy. In a sense, the several classifications are broad answers to the question: "What does music therapy offer the individual?" A construct attempts to propose formally, to define, and to limit, an explicit relationship between music and the behavior of an individual. The process then attempts to describe the manner in which the behavior of the individual is affected according to the construct.

The various classifications and constructs with their processes are not mutually exclusive. In any given therapeutic situation, several, or all, may be operating; however, the various exemplifications were deemed both significant and necessary to permit their delineation, and to identify bases for specific therapeutic action.

In most cases, only the word, "music," has been used in reference to musical situations, and may have any of four designations: (1) the music itself, (2) listening to music, (3) having music in the environment, and (4) the making of music. The processes should permit the reader to determine which of the four is meant. Further, the use of the single term, "music," may lead some readers to think more deeply about the application of a given construct to situations other than the obvious, thus expanding the function of the construct.

The three classifications which underlie the constructs and processes of music therapy are: EXPERIENCE WITHIN STRUCTURE, EXPERIENCE IN SELF-ORGANIZATION, AND EXPERIENCE IN RELATING TO OTHERS.*

The words used to phrase the classifications have been chosen purposely and carefully. Each classification is defined later; however, at this point, the meaning of the word, "experience," should be made clear. For most persons, the word, "experience," may signify events through which one has lived. Experience, however, may also designate the actual living through, or undergoing of, events in the present. Further, it may be used as either a noun or a transitive verb--the gerund and the present participle being "experiencing." In a basic sense, music therapy offers the individual the "experiencing" of events in certain ways; the processes attempt to define those ways of experiencing.

While past experiences of the individual may serve as a basis (and often a very important one) for organizing the therapeutic situation, that situation always begins in the present and goes into the future. No therapist can change the past experiences of the individual, but he may organize a "present" situation so that the "effect of the past" may be altered for a more adequate "future." It is in this sense, of the "present going into the future," that the word, "experience," has been selected for use.

Although all the classifications might equally well be considered as experience within structure, the term "structure" has been reserved for the first classification in order to emphasize the uniqueness of music--the structure is inherent in the music. The order of terms in the adopted classifications is important and indicative. A natural order is evident in the progression--an individual must be aware of, or have, some structure before an experience can become his or become organized. Likewise, the individual must have organization (again, possibly in his own version, when viewed by another individual) before he will use the experience externally or overtly. Assuming the above order, are there orders of some like kind by which to express the constructs under each classification? If so, on what bases?

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*At first, five classifications were formulated: (1) gratification, (2) structured experience, (3) environment conducive to recovery, (4) relationships, and (5) diagnosis and evaluation. After further analysis of the classifications, only three were considered necessary. In all phases of the use of music in therapy, "diagnosis and evaluation" should be constant activities. Further, the principles originally placed under that classification would also logically fall under "structured experience." Somewhat similarly, "environment conducive to recovery" implies a "definite structure," and "relationships," while not strictly equivalent to, might be considered as, "socializing experience." Temporarily, the three classifications became structured experience, gratifying experience, and socializing experience. "Gratifying" and "socializing," however, are commonly used terms and, in part, are associated with certain psychiatric and psychotherapeutic schools of thought. To avoid misinterpretations which might arise from the use of the more common terms, and because their meanings were not strictly what was desired, the terms "self-organizing" experience and "other-relating" experience, to be defined later, were selected.

One possible order might be found on a continuum of how much of an individual's behavior is required *by the music itself*, and how much is required *by the situation* in which music is used. Phrased in another way, how much control of behavior is demanded by the music and how much by the manipulation of the environment by the therapist? This may apply also to the major classifications. A second basis was the consideration of the *directness with which the behavior might be observed*; again, a kind of continuum, directly observable behavior to inferred behavior; e.g., "played his note on time" to "he looks like the music made him sad." One further basis seemed logical. Could the behavior be graded on a continuum from simple (almost reflex or conditioned response) to complex (involving integration of several or many simple responses); e.g., from just beating a drum to beating it *appropriately* so that others might play or dance with the beat?

Each classification and construct is numbered in parentheses. The whole number shows the broad classification; the tenth, the construct; and the hundredth, a sub-construct. The processes are then presented as behavioral definitions for each construct, insofar as possible. The exact numerical value given each item is not particularly indicative, but the relative value is. At first reading, the numbering system may be largely ignored, and more appropriately reserved for later study.

Experience Within Structure

"Experience within structure" (1.00) refers to those behaviors of an individual which are required by, and are inherent in, the musical experience itself. While a therapist must prepare the experience for the individual, the mere commitment to the experience places the individual in a situation where his (future) behavior is determined primarily by musical factors, and not by other factors or persons in his environment. The commitment to the structured experience may be only temporary, for the duration of the music, or some part of it. However, this does not negate the possible continued influence of the music on the individual; it refers mainly to the behavior of the individual which is immediately observable. Further, music is not considered impersonal. (The meaning, or importance, of music to the individual belongs in the next classification, "experience in self-organization.") The focus of concern, here, is on the musically structured experience, and the behavior which is required by that structure. The motivation for this experience tends to be an intrinsic of the music, which carries its own persuasion for behavior.

Major goals in therapy are to lengthen the temporal commitment (objectively measurable), to vary the commitment (objectively describable), and to stimulate an awareness (inferred from behavior and directly related to the next level, experience in self-organization) of the benefits derived thereby.

Music Demands Time-Ordered Behavior (1.10)

The unique structure of music--existing only through time--requires the individual to commit himself to the experience moment by moment. Except for relatively minute deviations, music, whether it be an entire piece or merely a measure or phrase in repeated practice, cannot be interrupted without losing its intent. Participation in music is not ordinarily achieved by "a note a day." Music, once begun, must be continued without interruption in order that a completed idea or expression may result; regardless of length or complexity, the type and degree of skill required, the music must be carried through in its time-order.

The necessity for moment to moment commitment by the individual rests in the music itself and does not derive from any other part of his environment. The extent and rapidity of the commitment may be adjusted to the individual by appropriate selection of the level of skill required, the length and complexity of the music, and the specific responses required, including the number of responses per unit of time.

Time-order, as conceived here, is a broader concept than rhythm. On the most elementary level it involves the sequence of sounds and no sounds. On other levels it concerns not only the making of sounds at the correct times (rhythm), but also the correct sounds (pitches), the correct emphases or stresses of those sounds (dynamics), accuracy in making several sounds together (harmony and ensemble), and the organization of other kinds of sounds (timbre). Regardless of the higher or more complete organizations in music, the underlying factor is time-order.

This construct is considered fundamental to all the other constructs. It might be called the "working principle." Building upon the time-ordered structure inherent in music, the skillful therapist may involve the individual in any of the relationships defined by the other constructs.

Further, this construct emphasizes the uniqueness of music when contrasted with other approaches used in therapy. While all experiences have beginnings and go into the future, the time-order of music requires the individual to structure his behavior in, relatively, the most minute and continuous manner. No other form of human behavior both demands and depends so completely on strict adherence to time-ordered structure.

Music Demands Reality-Ordered Behavior (1.11). Once the individual is committed to music, his behavior becomes reality-ordered. Music involves reality orientations in many forms, and on such levels as the situation requires: response to aural stimuli, musical and verbal; instruments; musical notation; conductor's or therapist's directions; the individual's own body and its parts; and so on. The individual's responses may be judged as to their appropriateness to the "real" stimuli, stimuli built on the time-ordered necessities of a given musical situation and established in the individual's environment by the therapist.

A question concerning the place of free improvisation and the possibility that it would not necessarily be reality-ordered might be raised here. (Improvisation is included in the next classification, "Experience in Self-Organization.") Concern is for the individual's evidenced behavior and not for what the music means to him. Improvising implies doing something that is meaningful to the person doing the improvising. The pursuit of meaning in music is personal and internal. The ability to improvise, at least meaningfully for others, demands a background of structured experiences which permits the improvisation to take place. Thus, at this level and within the meaning and intent here, the question is premature.

Music Demands Immediately- and Continuously-Objectified Behavior (1.12). Once committed to the music, the individual's behavior is no longer subjective but becomes immediately observable or "objectified." The musical appropriateness of the behavior must always be judged with reference to the ability of the individual. Further, his behavior is continuously objectified and observable, requiring attention to the music through the duration of the musical experience, even if attention fluctuates.

Because the time-order of music is continuous, the individual's responses must be continuous; because the individual's responses are continuous, the appropriateness of his responses are immediately observable, moment by moment.

Music Permits Ability-Ordered Behavior (1.30)

The behavioral requirements in music are uniquely adaptable to the individual's operational levels and capacities. Musical behaviors, the specific functionings of the individual in specific musical situations, range from the simple to the complex, from the awareness or performance of a simple rhythmic beat to the awareness or performance of a highly complex musical structure. Further, behaviors ranging from simple to complex may coexist among several individuals, as in group performance where the behavioral requirements of one musical part are of a more simple nature, such as beating the bass drum, than those of another part, such as playing the melody on a trumpet. Also, especially desired musical experiences, such as playing a certain piece, can be modified or adapted (rearranged) to fit the capabilities of each individual.

Music Permits Ordering of Behavior According to Physical Response Levels (1.31). Required musical behavior may be adapted to the physical capacities and operational levels of the individual. The physically handicapped individual may be helped to make music by the use of special devices such as especially designed mouthpieces or prostheses. Modifications of the traditional positions for playing certain instruments, such as placing a bass drum on its side, or preparing a special stand for an instrument, may be made to permit the use of the individual's movement capabilities. The variety of physical movements used in playing musical instruments, or in singing, offers a wide range for structuring needed muscular movements. The attainment of musical ends usually makes such exercises more acceptable to the individual.

Music Permits Ordering of Behavior According to Psychological Response Levels (1.33). Required musical behavior may be adapted to psychological capacities and operational levels. The psychological levels may have several bases: (1) mood--such as sad to happy, depressed to manic; (2) motivation--low to high desire to achieve; (3) intellectual--mentally retarded to gifted; (4) levels of musical knowledge. Partly through the motivation intrinsic to music, and partly through the appropriate structure provided by the therapist, the individual may be moved from a less desirable psychological level to one more desirable.

Music Evokes Affectively-Ordered Behavior (1.50)

The general behavior of groups can be controlled, or at least influenced, by appropriately chosen music. Slow tempos, smooth (legato) lines, simple harmonies, and little dynamic change are characteristic of music which tends to reduce or sedate physical activity and possibly to enhance contemplative activity of individuals; fast tempos, detached (staccato) lines, complex and dissonant harmonies, and abrupt dynamic changes tend to increase or stimulate physical activity and possibly to reduce mental activity. Given a knowledgeable use of music, the desired result is usually achieved with groups; prediction is less sure when dealing with an individual, because of possible unique associations the individual may have with the particular music or with music in general. These associations in themselves may be significant.

Music Provokes Sensory-Elaborated Behavior (1.70)

Sensory stimulation and resulting awareness have been shown to be human needs. Participation in music offers unique sensory experiences ranging from just perceptible responses on the neuro-muscular level to the highest level of human behavior, intellectual mediation and contemplation, all of which are essential to aesthetic experience. Further initiation or recall of experiences involving sight, sound, odors, tactile sensations, and so on, may be evoked by music. Experiences such as the smell of rosin on the bow, tactile sensation of vibration, auditory and visual awareness of concerted efforts such as identical phrasing, bowing by string instrument players, and breathing by wind instrument players, offer an elaborate world of sensations.

Music May Elicit Extra-Musical Ideas and Associations (1.71). Music may often bring about certain pictures or ideas. When the individual's ideas fall outside the "normal," his differences may reveal significant insights into his particular structuring of his world. Such insights have been used as the basis of several projective tests and in psychotherapy. In certain cases, the association-provoking quality of music may be used to reinstate or remind the individual of healthy forms of behavior, including ideas.

Experience in Self-Organization

"Experience in self-organization" (2.00) is concerned with inner responses which may be inferred only from behavior, and has to do with a person's attitudes, interests, values, and appreciations, with "his meaning to himself." It further includes most, if not all, of what has been commonly termed gratification, and also the strictly personal factors in the aesthetic experience. (Of concern here is not only gratification but also the fact that nearly all people like some kind of music very much.)

A common goal in therapy is to structure experiences (objectively describable) so that the individual receives the satisfactions (inferred) necessary for him to seek more such experiences (objectively measurable), and to see that such experiences lend themselves to the maintenance of better adjustment (objectively describable) with his environment.

Music Provides a Means for Self-Expression (2.10)

Whenever choice by an individual is involved, his behavior is a reflection of his self-expressive needs. These needs, while not in themselves directly observable, may give rise to consistent patterns of behavior. The adaptability of music provides many avenues for self-expression in performance and listening, which range from random to complex and highly organized expression. The wide range of musical expressions also offers many socially acceptable ways of expressing negative feelings, energetic behavior, and "closeness," any of which ways may reduce the need for expression in more overt, unacceptable forms. The movement from random expression to organized, meaningful expression is the goal.

Music Provides Compensatory Endeavors for the Handicapped Individual (2.20)

The handicapped individual, who is helped to accomplish in music some of the same things that his "normal" counterpart does, may be led to a healthy acceptance of his limitations. He may come to place his handicap in perspective, as a limitation only of his means, as only one aspect of himself, rather than his whole person.

Music Provides Opportunities for Socially Acceptable Reward and Nonreward (2.30)

When appropriately structured, musical activities may carry an inherent pleasure found in the performance itself. The individual may, realistically, receive commendation where indicated for musical and/or treatment purposes; or commendation may be withheld. The adaptability of music provides many opportunities for rewards, ranging from immediate to long-term. In music it is generally the performance, not the individual, which receives negative criticism. In this way the criticism need not become rejection.

Music Provides Means for the Enhancement of Pride in Self (2.40)

Positive learning experiences usually enhance an individual's feelings of worth. A foreseeable product or result often serves as its own stimulus to learning. The adaptability of music to learning, on many levels of required ability, makes it uniquely versatile for structuring situations leading to feelings of pride. The individual is confronted with objective evidence concerning the relationship of effort spent and goal achieved.

Music Provides Means for Successful Experiences (2.41). The individual may choose, or have arranged for him, a level of musical participation almost certain to insure success. Careful guidance of the activity and the wide range of experiences offered by music make this possible. The permissive atmosphere of most musical group activities provides a continuum of opportunities for successful experience, ranging from mere presence within a group to a position of prominence.

Music Provides Means for Feeling Needed by Others (2.42). Successful performance normally leads to enhancement of self-esteem. The feeling of being needed by others, of giving the self to an important pursuit, and of achievement, may be achieved through especially structured musical situations.

Music Provides Means for the Enhancement of Esteem by Others (2.43). A person who shares successful musical experiences with others, or contributes to the success of others through a supporting role, normally receives the esteem of others. Due commendation may be given, and positions of leadership may be arranged, in structured musical situations.

Experience in Relating to Others

"Experience in relating to others" (3.00) is concerned with the behavior of the individual in relation to other individuals, singly or in groups. Music provides experiences for individuals as group members. Music, itself, serves as the reason for individuals to be together; the individual in a group need not participate in the group except as a musician, and he is usually accepted when doing so. Ensemble music, however, requires the individual to subordinate his own interests to those of the group if music is to result; this demand, although possibly enforced by another person, objectively derives from the music and not the other person.

The goal is to increase the size of the group (objectively measurable and describable) in which the individual may successfully interact, to increase the range and flexibility of his behavior (objectively describable) in those interactions, and to provide experiences (objectively describable) which will help him relate to noninstitutional life.

Music Provides Means by Which Self-Expression May Be Socially Acceptable (3.10)

Music provides a wide range of emotional expression. Positive, as well as negative, feelings for others can be expressed through music, and social acceptance is usually forthcoming, or at least permitted. Ways to achieve and excel through superior performance are abundantly provided for, and accepted in, music. Expressions not otherwise permitted may be expressed in music. Dance activities permit a closeness to other individuals not otherwise normally possible. Transitory and continuing feelings are both expressible in music.

Music Provides Opportunity for Individual Choice of Response in Groups (3.20)

While optimum performance of each individual in a musical group may be desirable, the individual, at times, may choose his own level of response.

Music Provides Opportunities for Acceptance of Responsibility to Self and Others (3.30)

Music provides many ways in which the individual may accept responsibility. His arrival on time for lessons or other activities, or his participation as an important member of a group, requires him to be responsible to others. Music may be the reason, at first, for his acceptance of responsibility, but extension to acceptance in general is the goal.

Music Provides for Developing Self-Directed Behavior (3.31). The wide range of experiences and levels of achievement offered in music permits the individual a variety of choice in personal goals. Once a choice has been made, the individual must initiate and maintain the practice required for the accomplishment of the goal. Although the situation may be structured to assist the individual in attaining his goal, e.g., helping him to establish realistic expectations or arranging steps in his program which assure success, he must increasingly assume more responsibility for directing himself. Musical progress can, in the end, only be made through his own efforts; it cannot be done for him.

Music Provides for Developing Other-Directed Behavior (3.32). In group settings, the individual must learn to subordinate his performance to that of the group. An awareness of the performance of others, and of his own in relation to theirs, is constantly required in the process of achieving appropriate musical expression and interpretation. Control of the self in relation to behavioral patterns of the group is required.

Music Enhances Verbal and Nonverbal Social Interaction and Communication (3.40)

Most social occasions are accompanied by music; sociability is generally increased. With music in the background, many individuals find it easier to talk with others. In psychotherapy, individuals often talk more freely in the presence of music. Individuals may express in music, or through musical preferences, feelings not otherwise expressible. Music may speak where words fail.

Music Provides Means for Experiencing Cooperation and Competition in Socially Acceptable Forms (3.50)

The very nature of music makes possible the experiencing of socially acceptable forms of cooperation and competition, singly or in combination. Musical groups not only require the individual to cooperate, but also offer him the opportunity to compete musically. Also, he may compete with himself, striving always to improve his performance; no degree of excellence of which he is capable, and to which he might aspire, is denied him.

Music Provides Entertainment and Recreation Necessary to the General Therapeutic Environment (3.60)

Diversional and recreational activities are a necessary part of institutional routine. Performances by community musical organizations, individuals, and stage groups can assist the individual in maintaining a general morale which may make specific therapeutic goals easier to attain. Such activities also permit the individual many experiences common to the world outside the institution. While these activities are desirable, they should not be confused with formal music therapy procedures specifically designed for therapeutic intent.

Music Provides Means for Learning Realistic Social Skills and Personal Behavior Patterns Acceptable in Institutional and Community Peer Groups (3.70)

Music skills usually enable individuals to interact more successfully in community groups. Dancing and other musical skills may help the individual to participate, with more poise and less need for defense in groups. Musical groups in the community are becoming more available to individuals and usually require minimal financial and social prerequisites.

Some individuals possess asocial characteristics of which they are unaware. Others know very little about personal hygiene and acceptable modes of dress. Musical situations can be especially structured, and in many cases provide the necessary motivation, to bring about an improvement in these aspects of the individual's behavior; such matters often greatly influence the individual's success or failure in his environment.

Concluding Remarks

Music therapy is a behavioral science, and like any science, it requires a theoretical formulation of its processes. To construct such a formulation is the purpose of this Part. The formulation is not proposed as a set of "true" laws and relationships. It is, rather, an attempt to integrate into one system the best knowledge and thought *presently* *available* concerning the function of music in therapy. Its orientation, or integrating focus, is the behavior of the individual when involved in a musical experience.

A theoretical formulation such as this may suffer one of several fates. It may pass into history having received little consideration. It may be examined and found wanting, and yet, because of the study it required, result in a different, more adequate formulation of theory. Finally, it may prove of enough interest and worth to be put to the test in practice and research, to be modified, improved, and expanded. Hopefully, the latter fate will come to pass. In any case, PROCESSES IN MUSIC THERAPY take place *by uniquely involving* the individual in EXPERIENCE WITHIN STRUCTURE, EXPERIENCE IN SELF-ORGANIZATION, and EXPERIENCE IN RELATING TO OTHERS.

PART III

MUSIC THERAPY FOR ADULTS WITH BEHAVIORAL DISORDERS

ROBERT F. UNKEFER

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MUSIC THERAPY FOR ADULTS WITH BEHAVIORAL DISORDERS

Introduction

Robert F. Unkefer

Since 1944, when the first formal university course in music therapy was organized, there have been constant attempts to describe what is done for, and with, patients in music therapy in the adult psychiatric hospital. The period dating from the formal beginning of music therapy is easy to characterize as two decades of very rapid change in treatment techniques in psychiatry itself. The rapid shift from rural to urban living in America served to bring focus on the severe problems of large mental hospitals. Concerned individuals and agencies struggled to turn the custodial asylum into the active treatment center.

Active treatment had its beginning when trained staff personnel were provided in sufficient numbers to progress from helping the patient to fulfill only the most basic physical needs to helping him to fulfill psychic needs. This active treatment helped him to recover and leave the hospital or encouraged him to function at the highest level he might reach within a planned and protected living situation.

Providing trained staff for mental hospitals continues to be a serious problem. Frequently, not enough money for salaries is available; but even when money is available, not enough trained personnel are ready. Nevertheless, a great growth in quantity and quality of staff personnel has taken place, and recently, new treatment techniques have been developed, redeveloped, and redefined. Many active treatment procedures, which were widely used when trained music therapists started to work in mental hospitals, have been discarded, and are now only a part of the history of psychiatry. Developments in the use of tranquilizing drugs in the middle 1950's allowed stoppage of some of the "drastic" therapies such as insulin-coma therapy. These drugs have also made unnecessary early practices used to control the patient's destructive physical activity; there is little need for the hydrotherapy room; many hospital doors which had to be barred and locked in the past can now be left open.

While the use of activities and the employment of activity therapists in psychiatric hospitals date from the late nineteenth century, the recognition of the activity therapist as a unique contributor to treatment is comparatively recent. Employment of activity therapists in large numbers to accomplish specific treatment goals has come about in the last two or three decades. Music activities were used by occupational therapists and recreation specialists and were found useful. This led to the employment of full-time hospital musicians. Specialized training for music therapists developed, and they became recognized members of the activity therapy disciplines, sometimes called adjunctive therapies.

Survey of Clinical Practice in Music Therapy

A review of the past 20 years' reports of clinical practice in music therapy in adult psychiatric hospitals serves to show fairly consistent development of methods and techniques. In general, changes of practice have paralleled those of psychiatry. Principles of music therapy were stated by Gaston[1] in 1954 after a comprehensive review of clinical practices and research. Those principles differ little in quality with the set of principles developed for this résume' in 1964. It is possible, however, to trace some differences in the manner in which music therapy practice has been described. It seems that the actual practice has not changed as much as the way clinicians have chosen to write about it.

In the 1940's, the small amount of clinical literature that did appear concerned itself with the imagined "healing power" of music *per se*. Reports of miraculous "cures" appeared in newspapers and some popular magazines; infrequently there was a report in a professional journal. In almost all of these stories, a reference was made to the fact that music could "reach" the patient when nothing else could. The music therapist did not describe the manner in which he approached the patient or how he used the music. It seemed that there was almost a common societal belief that music had inherent healing power, and thus much early practice which would now be considered quackery was accepted and, at times, even commended.

Most adjunctive therapies passed through a phase during which a particular activity by itself was credited far too much with direct healing power. Occupational therapists in the past have tried to relate particular crafts to aid patients with certain illnesses. There was a time when beating a loom was thought to be directly beneficial for particular patients. Recreation workers have tried to assess the peculiar healing powers of certain games or sports.

In the late 1940's, the more experienced music therapists and their hospital colleagues began to question "miraculous" cures related to music experiences of patients. However, these therapists were too willing and too quick to shift emphasis when questions were raised about the healing power of music. They could not prove that such power existed in music so they began to de-emphasize music activities and emphasize the development of interpersonal relationships. For a short period of time, every music worker tried to become a "junior-grade" psychotherapist and indulged in music activities only as the patient desired.

Other adjunctive therapists passed through this "psychotherapist, junior-grade" stage at about the same period. Activities were still available to the patients in the hospital, but consistent use many times gave way to long walks, visits to the hospital canteen, or trips to town so that the therapist could establish the proper "relationship." Many patients did benefit from this great amount of individual attention, but often the activity therapist was unable to cope with the demands of the open air psychotherapy situation, and many very sick patients could not accept the pressure of the one-to-one relationship when divorced from the activity.

Gradually, selected media and therapist-patient relationships have been assessed as two mutually supportive ingredients for successful therapy. The activities (media) serve to set limits and give focus to the important learning or relearning the patient has to experience.

Certain activities have long been used in the psychiatric hospital. Usually they can be fitted into a total pattern of (1) learning activities, (2) creative activities, (3) work and service activities, and (4) play activities. The wide variety of music pursuits for individuals and groups allows some form of musical endeavor in any of the four parts of this total pattern.

To summarize, it may not be inappropriate to say that in 20 years, music therapy, as well as other adjunctive therapies, passed through three periods or stages. First, much emphasis was placed on music without recognition of the important role of the therapist. Second, the therapist tended to disregard music in favor of the development of the one-to-one relationship with the patient. Third, a position between these two extremes has been adopted. The therapist uses his speciality in focusing the relationships with the patients and moving in the desired direction at the most suitable rate in both the activity and the relationship. However, an important point to remember is that clinical practice has not changed nearly as much as the manner of describing it. All through these three stages, the music therapist has worked with patients, for the most part, in the same manner. The shifts of emphasis are much more identifiable in the literature than they were in observation of actual practice.

It is not possible to predict with accuracy what direction clinical practice in adjunctive therapy will take in the immediate future. The shift to the smaller hospital, as projected in the report of the Joint Commission for Mental Health,[2] will cause some changes. These changes will be particularly evident in staff organization, but undoubtedly will effect some subtle changes in actual practice. Menninger has recommended a wide variety of activities and adjunctive therapy workers in treatment programs for many years. In two recent books, Menninger et al. [3,4] have indicated a change in title for those workers previously known as adjunctive or activity therapists. The change is described in the following quotation:

> We conceive of this area, therefore, in terms of an educational program, a school in "practice living." Those who were formerly designated "therapists" (as if no one else in the hospital were giving therapy) have risen, in our concept, to the role of teachers. They teach ways of living, better ways of living, civilized techniques of expressing instinctual urges. Like all teachers, their personalities and examples are important. But more important are their special knowledge, their skills, and their example in knowing and using and loving certain techniques of dealing with the realities and opportunities of life.[5]

It is doubtful that the actual titles of these hospital workers will change; some of them have been firmly entrenched for generations. It also seems that this projected change is not a real shift in actual clinical practice, but only another means of description. In simple language, it does clarify the job to be done quite specifically. Acceptance of adjunctive therapy as a basic educative or reeducative process by both psychiatrists and therapists represents more maturity.

Research

As in all other areas of adjunctive therapy, research in music therapy related to adult psychiatric treatment is still in an "incipient" stage of development. "Incipient" seems to be an appropriate word; it is meant to imply the beginning of effective research. The direction is yet unfocused. Newer techniques of measurement need to be applied in laboratory research, and more precise methods of observation need to be used in clinical research. Nevertheless, some valuable and carefully conducted work exists. This research should be influential in clinical practice.

Much of the literature published in professional and pseudo-professional journals deals with operational practices in hospital music departments. The techniques that are described are often directly related to particular music skills of the music therapist who is reporting. It is possible to accept these articles as low-order research reports since they frequently include some careful observations of patient behavior and changes in behavior which seem to be connected with experience in music and music activities.

The problem in clinical research in music therapy is the same as in all areas of clinical research. It is very difficult to assess how much, if any, of the patient's improvement is due directly to a single part of his treatment. This is true in all medical practice. Most patients get better, some get worse; just why or how is often not clearly understood.

Recognition of the unsolved problems related to clinical research should not prohibit such research, nor should more descriptions of clinical work be discouraged. In fact, the case presentations which follow these remarks support theoretical constructs. Some of the techniques can be duplicated by other music therapists; some probably cannot.

Listings and descriptions of research appear in two recent issues of the Journal of Music Therapy. Sears and Sears[6] abstracted 170 research studies in clinical reports and have made qualitative judgments about the research procedures of these studies. Schneider et al.[7] listed almost 800 titles with complete source information; all bear directly on music therapy. A composite list appears in the appendix. A few of the basic research studies are cited below.

Clinical Studies. Michel[8] surveyed the case reports of 375 patients, each of whom had participated in a music therapy program in a Veterans' Administration hospital at some time during a six-year period. Fifty cases were intensively studied using follow-up data obtained from questionnaires. Two hundred psychiatrists who had had experience with music therapy were questioned, also. This study was considerably more objective than usual case reports, and substantiated the uses of music as therapy by quantitative as well as qualitative measurement.

Darbes and Schrift[9] studied the effect of music therapy on three groups of hospitalized psychiatric patients. This is an important study, not so much for the conclusions which were drawn, but for the careful techniques of observation which were developed.

Several studies have been concerned with the use of music in the hospital setting to increase group conversational frequency. Dollins,[10] Shatin and Zimet,[11] and Sommer[12] have reported controlled studies of this type. The Shatin and Zimet study showed that background music caused a statistically significant alteration in frequency and quality of verbal interaction of patients during group psychotherapy. A unique feature of this study was the qualitative judgment of the verbal responses.

A number of music therapists have tested rhythmic responses of patients. Graham,[13] Ruppenthal,[14] Schneider,[15] and Shatin[16] have published reports of such studies. The obvious lack of coordination and the arhythmic motor responses of withdrawn schizophrenic patients attracted the attention of these experimenters. In general, the studies give good descriptive material on the motor and rhythmic responses of certain types of patients and some careful judgments of how music-rhythmic activities can be used.

Laboratory Studies. Research in music, conducted outside the hospital setting, has given guidance to clinical efforts. Some basic research studies which contain direct implications for clinical work have centered on showing the type and strength of physiological changes in the human organism that can be manifested by changes of music stimuli. Such studies are not new. In the middle 1930's, after reviewing the experimental literature concerning the effects of music on physiological processes, Diserens and Fine said

> Music: (1) Increases bodily metabolism . . . (2) Increases or decreases muscular energy . . . (3) Accelerates respiration and decreases its regularity . . . (4) Produces marked but variable effect on volume, pulse and blood pressure (5) Lowers the

threshold for sensory stimuli of different modes (6) . . . influences the internal secretions . . .[17]

More recent studies have extended the early reports, and experimentation is continuing in this area. In the 1950's, numerous studies were completed that provide noteworthy examples of systematic, carefully controlled experimental work. Each of these studies fits into a total picture which, when viewed as a whole, leads to the conclusion that music *per se* can effect predictable physiological changes in the human organism.

Changes in galvanic skin response (GSR) seem to have received the most attention from the experimenters. Weidenfeller and Zimny[18] report a recent study of GSR changes induced by music in two types of psychotic patients. The same experimenters have published two other studies in this area.[19,20] Gray[21] studied the pilomotor reflex; Ellis and Brighouse[22] studied the effects of music on respiration and heart rate; Margaret Sears[23] studied vascular changes in capillaries as effected by music; William Sears[24] reported a very detailed examination of the effects of music on muscle tonus; Wilson[25] studied variations in gastric motility caused by music stimuli. Of particular value is William Sears'[26] unique study of postural responses to recorded music. Verified and consistent changes in posture of his subjects were induced by changes in music stimuli.

The way is not clear, yet, to apply all findings to clinical work. Much more understanding of the relationship between physiological and emotional changes must be gained. Even the common sense application of calming and stimulating music for a variety of patients is not always correct as has been shown by Shatin and Zimet[27] and Schneider.[28]

Clinical Descriptions

Support for these introductory remarks and examples of clinical work may be found in the reports of the eight authors whose papers follow. They have all been concerned with developing treatment techniques and specific goals for music therapy. They have also been willing to seek objectivity in their work and in the reporting of their work. Slaughter's article supports and clarifies the expressed position of music therapy in psychiatric practice. He includes several case studies characteristic of his work with individual patients in a private psychiatric hospital. Thompson has directed a music and creative arts therapy unit in a county psychiatric hospital for many years. She clearly identifies goals for several types of patients and presents the practice of music therapy in a large hospital. Ruppenthal, Spry, Gray, Glover, Goldsmith, and Collins have provided case studies describing a variety of treatment goals and the manner in which music and music activities were used.

Approaches to the Use of Music Therapy

Forrest Slaughter

Introduction

During the past few years, concepts in the mental health profession have been undergoing continuous and dramatic changes.[29,30,31] Music therapy also is in an ever-changing condition, and its concepts, procedures, and practices need constant reevaluation in order to meet new concepts of psychiatric treatment.

Although much research into the potentials of music therapy remains to be done, it seems evident that music can play an important role in the rehabilitative process. Music can, and does, influence human behavior, but it is not a cure-all. It cannot always accomplish treatment aims and goals by itself. In order to be most useful and therapeutic in the hospital setting, music is subordinated to an overall treatment plan designed to meet the specific needs of the patient as prescribed by a physician.[32,33] Music is administered by a music therapist who, through his personality, knowledge of his medium, skills, examples, and attitudes provides experiences necessary in achieving therapeutic results.[34,35,36] The therapist uses music as a tool in assisting each patient to reorganize his disorganized and inappropriate patterns of behavior into more acceptable ways of dealing with life's problems.[37,38,39] In this way, both the therapist and the music contribute to the positive growth and development of the patient.

Case Studies

The following cases from a large Midwest state hospital and a small private hospital illustrate how music may be used in providing therapeutic experiences for the patient.

Case 1. A woman, in her middle 20's, was admitted to the hospital because of her uncontrollable, hostile outbursts and combativeness. She had alienated her family before coming to the hospital, and had pushed personnel and patients away during her stay on the ward. She remained aloof and contemptuous of other peoples' ideas and suggestions. She had lost interest in her personal appearance and rarely dressed appropriately. One of her interests from childhood, as expressed to her doctor, had been to play the piano, although she was never allowed the opportunity.

It was decided that therapeutic use could be made of her interest in music, so she was scheduled for two music sessions a week in a private room on the ward. The first few sessions were spent in discussing her interest and likes in music. She decided that she would like to start with the fundamentals and learn to play "correctly." The therapist took her at her word, and formal lessons began in an adult piano method book. The structured lessons went fairly well except on a few occasions when the patient attempted to discuss her family affairs and stated with hostility that she should be home with her family, and really had no right to be "fooling around with the piano" since she was too old and it was too late to learn. During these times, the therapist assured her that he understood how she felt, having wanted to play for so long and not being able to do it, but that she had started now and hadn't really given herself a chance to find out whether she could learn to play. This usually led to her continuing her lessons. Once, during a lesson, she had a verbal outburst during which the therapist merely waited until she was finished and firmly suggested that they get back to work with the lesson. This they did, and the lesson progressed fairly well.

She continued to progress until she was able to play simple tunes with both hands. At this time, she began to ask for more advanced music. The therapist responded that they should stay with the material they were working on but he did teach her simple tunes, like "Three Blind Mice" and "Chopsticks." While the patient played the melody, the therapist provided the chordal structure. The tunes were played in various styles and with various dynamics. When playing in the jazz style, both therapist and patient were free to play as loudly as they liked. When playing a waltz, usually both played softly and attempts were made to shade the tones. Once, after completing the regular lesson, both therapist and patient played "Chopsticks" in the jazz style for quite a few minutes and fairly loudly. After finishing, the patient stated she enjoyed playing that way but was tired and didn't have the energy to play it in the other styles. The therapist agreed that it was tiring but that music could be played in a variety of ways, and this was one of the reasons for its popularity. Both therapist and patient agreed that it was a good session.

Steady contacts with, and reports to her doctor were made. When the music progressed to the introduction of flats, she would play B instead of B flat. When this was pointed out to her and it was explained that, in addition to not doing what the music called for, the piece sounded out of tune. Her response was that she didn't want to "be flat," but only to "be natural" and that she was not listening to the music at those particular places. The therapist suggested she listen while he played the song using the B flats and at the same time sang the song using the B naturals. When the clash came between the piano B flat and the vocal B natural, the patient registered facial dissatisfaction and stated that it did sound out of tune. The therapist then proceeded to have the patient sing the tune as she knew it, without the piano. She sang every one of the B flats as they were supposed to have sounded. The therapist then asked her to sing the melody again and he played the melody on the piano at the same time except playing B naturals as the patient sang B flats. This procedure lasted until about half way through the piece when the patient stated that she would like to attempt to play the piece now with the B flats since she had not been aware of how it sounded without them. She began to play the piano but hesitated in putting her finger down on the B flat. This created problems in rhythm. At the end of the session, some discussion ensued concerning the patient's not wanting to play the B flats. The therapist pointed out that she appeared and sounded comfortable and natural when she had sung them as they were supposed to be. The therapist also stated that she appeared more uncomfortable, by the expression on her face, when he played the notes according to the music and sang them differently. It was also pointed out that she registered uncomfortableness while the therapist was playing B naturals and she was singing B flats. After further explanations concerning the tonal system of our culture, she was told that as she progressed other flats would be included. The patient smiled and stated that this could be very complicated. The therapist agreed but stated that this depended on many factors, and in order for her to play as she would like to, she would have to learn to play as many flats as she could. During the following lessons, she began to play with more ease, and on several occasions, one of the ward personnel joined her in singing the same song in which she first had trouble with flats.

As she continued to improve, her mode of dress changed. At one lesson, she met the therapist at the door with a new hair-do, dress and proper make-up. When the therapist mentioned how nice she appeared, she smilingly stated that she was due for a change and that the therapist always locked neat when he came for the lesson, so she was going to try to be better appearing. She continued improvement in her appearance and in controlling her hostility, and was eventually scheduled for small groups, occupational therapy, and recreational activities.

Case 2. A young lady was admitted to the hospital because of her promiscuous acting out and irresponsible, delinquent behavior. She had no plans for productive living and was an expert at manipulating and playing people against each other. She had had some background in music but was never quite successful in using it. She needed to develop better interests and controls through a structured program. She needed to gain gratification through socially acceptable behavior.

Her previous experience in music provided one of the treatment approaches. She was scheduled for two 30-minute individual lessons with five 30-minute practice times a week in piano and in violin. She was also scheduled for beginning band rehearsal for one hour, three times weekly, and in mixed chorus for one hour, twice weekly. The first scheduled sessions in all music programs went quite well with the patient expressing interest and delight in being able to do something constructive. While attendance and interest in the group activities remained fairly high, her attendance at the individual lessons and practice began to diminish and become erratic. On those occasions when the patient was tardy or failed to come for either a lesson or practice time, she would bring a gift, made in occupational therapy or manual arts, as a "peace offering." The therapist refused to accept the gifts and firmly insisted that she attend the scheduled meetings regularly and on time as was expected. Gradually, she did improve in her attendance at the individual sessions with a corresponding improvement in her musical performance for which she was complimented. On several occasions, the patient had mentioned that she thought she was doing a better job of controlling and carrying through with her playing on both instruments. What was meant by "carrying through" was that, although the patient would start each piece or exercise, she rarely finished it as it should have been. During these episodes, the therapist would stop the patient and insist that the section be done over as proficiently as the rest of the piece.

In the meantime, she had continued to progress in the larger group activities. In the band, she had volunteered to help some of the slower members. Her improvement in sight-reading, timing, and dynamics gave her the amount of security she needed to help others.

A dynamic step forward in her treatment came when she was elected vice-president and librarian by the members of the mixed chorus. As librarian, her duties included arriving a little before the others were to arrive so that she could have the music passed out and ready. She also collected the music after rehearsals and kept it neatly arranged on the music cabinet. Since she had had some choral experience, she was instrumental in helping the group decide on some of the music they performed. The patient chaired a small committee chosen by the other members, along with the therapist, for the purpose of gathering information concerning new robes that the chorus was to wear during concerts.

Further progress was made in the patient's treatment when she was scheduled to catalogue approximately 500 new records for the music department. The weekly patient newspaper devoted several columns to the patient and the job she had done in helping to improve the system of record check-outs. The activities in music had offered the patient new, structured interests through which gratification could be gained in a socially acceptable way.

Case 3. A successful business man in his middle 50's was admitted to the hospital because he was losing interest in his business, friends, organizations, and most of his previous hobbies. It was decided that he needed to develop new interests and hobbies. One of his secret ambitions through the years had been to play the piano for his own enjoyment. He had never found time to do this because he was always striving to be a successful business man. His doctor prescribed piano lessons for him as a part of his total treatment plan. At first, the patient was hesitant because he thought that his age was against learning. Further, he had no particular ability for playing by ear, and he wondered how he could accomplish anything. The therapist agreed with him up to a point but assured him that although age could affect learning, it depended on what and how he wanted to play, the amount of interest, time, and willingness he was able to put forth. The patient wanted to play simple, older tunes that were familiar to him. He wouldn't mind being able to play some of the newer tunes, if they were simple. Both patient and therapist agreed to give the lessons a try.

The patient was scheduled for three individual lessons a week without practice time. The therapist started the patient in an adult book and progress was fairly rapid. By the third lesson, the student had become acquainted with the basic notes, timing, and fingering that were needed. By the sixth lesson, the patient was playing traditional tunes, arranged with single notes in both hands, and continued to progress to the point where he could play using three-note chords.

Gradually, the patient improved to the point that a group of patients asked him to play at a small function that they were having one evening. He asked the therapist whether he should play and stated that his doctor had left the decision up to him. The patient wanted to try but wasn't sure that he could do a good job. The therapist reminded the patient that he was taking the lessons to learn to play for his own enjoyment, but if he felt comfortable playing for others he could. He eventually decided not to play, but told the other patients that he might be interested at another time.

Although the patient was discharged within a short time, he had asked the therapist's opinion about continuing lessons after he returned home. The therapist agreed and encouraged the patient to do this if he felt that he could, but to look for a teacher who would understand the purposes for which he was taking the lessons. Within a few days, and before he had left the hospital, the patient had started to search for the proper music teacher through his family.

Case 4. One shy, intelligent patient was an accomplished instrumentalist with broad, professional experience in both classical and jazz music. After a frightening experience, he began having difficulty in controlling himself. His social life became restricted. Fearing error and blame, he became unable to make decisions and wanted others to make them for him. If they did, he was dissatisfied and uncomfortable. Whatever the situation he felt trapped. After the initial interviews and observations, it was decided that he needed to rediscover his prebreakdown adjustments. He needed to use the patterns that made him the good musician he was prior to his illness.

The doctor and music therapist decided that the patient should be given individual lessons twice a week. The first sessions were uneventful and progressed appropriately with the patient being able to accept the one-to-one relationship. Occasionally, the patient attempted to minimize his music ability and accused the therapist of giving insincere compliments. The therapist's reassurances were met with doubt and the patient would launch into an explanation of why his tone, fingering, or other techniques kept him from performing well. Then he would sadly state that he did not know whether he should continue playing. Sometimes, the patient would weigh the question of continuing a musical career. He would again enumerate his physical complaints. The therapist tried to convey that he understood how the patient felt in not being able to make such decisions and encouraged him to attend to the lesson at hand.

Later, as the individual sessions progressed, the patient expressed interest in ensemble work. After various discussions, involving the therapist, patient, and doctor, it was decided that playing in the ensemble must be the patient's decision. The patient decided to enter a small group and did well because of his experience.

During one of the meetings, in which plans were mapped for a performance, the patient misunderstood a remark that passed between the therapist and another member of the group. The patient became upset, loud, and abusive toward the therapist. All attempts by the therapist to control his action were met with hostile accusations. He continued to blast away at the therapist. Finally, the therapist firmly ordered the patient to stop this behavior or leave the group. This brought more hostile abuses and a threat to quit the ensemble. The therapist remained quiet, as did the other ensemble members, until the patient finished. By this time, the hour was up for the session. The other members left the room, but the patient continued to pace the floor casting angry glances at the therapist who said he would be looking forward to seeing the patient at the next session. The patient attempted to speak, could not, cleared his throat, turned away from the therapist and hastily walked from the room. He was present and contributing to the group at the following session.

On one other occation, after the ensemble had been incorporated into the concert band, plans were made and completed for a band concert. The patient had cooperated in preparing for the event. A few days before the concert, he approached the therapist and stated that he did not know whether he would play in the concert or not. The therapist listened to the patient's explanations and encouraged him to talk this decision over with his doctor. Later, the patient repeated that he did not know whether he would play, but emphasized not playing. Again the therapist referred him to his doctor. Finally, the patient discussed his problem with his doctor who in turn did not make his decision for him but referred him back to the therapist. In the meantime, the therapist and the doctor had met for a conference and it was decided that neither would decide for him, but would encourage him to make this decision. The patient finally made his decision not to play the day before the concert. When he decided not to play, he had made another forward step in his recovery by making his own decisions and surmounting his fear of being wrong and being blamed for it.

Case 5. A teenage boy was admitted to the hospital because of strange withdrawal behavior, his loss of interest in personal appearance and former hobbies of art, fishing, and golfing. He was quite confused and threatened bodily harm to his family on several occasions.

He needed to learn to control and express his destructive impulses in a socially acceptable way. The patient was scheduled for drum lessons twice weekly because he had shown some interest in music. At first, the lessons were fairly unstructured except to allow the patient to sit at the drums and pound away. Very little verbal communication existed between the patient and therapist except "hello," "goodby," and a casual "go ahead" by the therapist in allowing the patient to beat the drums at will. Occasionally, the therapist would step to the piano and attempt to join the patient in a jazz duet. This was impossible since the patient banged away in no certain rhythm.

This continued until the therapist began playing records, containing jazz drum solos, just about the time the patient was due for his session. One day as the patient arrived for his session, he stated that he wished he could play drums like the "guys" on the records. The therapist discussed this possibility with the patient and asked him to think about it and if he decided he would like to learn, they would give it a try.

Eventually, the patient decided he would like to try to learn the drums, and the first structured lessons progressed quite well. On several occasions when the lessons in hand and foot coordination became difficult, the patient became upset and wanted to withdraw from the lessons and return to just pounding again. After consulting his doctor, it was decided that he should be encouraged to continue his lessons. In a few weeks, he began to show considerable progress, and individual practice time was added to his schedule. Further progress was shown in his treatment when he was able to ask the therapist to play the piano with him in simple duets.

As the patient continued to progress, he was able to cope with his hostile feelings, and was able to enjoy learning to play the drums. He eventually enrolled in high school classes and in due time received his diploma.

The foregoing illustrations are not intended to be all-inclusive, nor to suggest any final or rigid approach to the use of music in the hospital setting. They do not imply that music was the only activity being used with the patient. In many cases, the patient was scheduled in other occupational, recreational, and educational activities. These examples are not meant to show that all attempts with music in the clinical setting are successful in achieving treatment aims and goals. However, they do serve to give a better understanding of how music may be used in the psychiatric setting.

Music and Creative Art Therapies in a Hospital Setting

Myrtle Fish Thompson

This report outlines the main divisions of a music therapy program in a hospital setting and the borad concepts upon which it is based. Case histories are then presented.

Work done in the clinical center (music therapy workshops) stresses participation in individual lessons and practice, in small ensembles (coached and uncoached), and in large choral and instrumental groups. The purposes are to stimulate patients' interest in music as a meaningful cultural activity and to direct their energies into making music for enjoyment, satisfaction, and growth toward health. Socialization values lie in the pleasure of being together, doing things together, and in learning to share aesthetic experiences with others. Sense of achievement and feelings of self-worth fortify ego, while the discipline of belonging to a group requires personal organization, recognition, and acceptance of reality goals.

Music activities carried on elsewhere in the hospital involve performances by patients and personnel. These are used for entertainment on the wards, for parties, and for community sings and dances in the auditorium. Background music is supplied for administrative functions and for meetings of various professional departments. Suitable music is provided for weekly religious services. Such out-of-clinic activities serve to enhance the prestige of the patients who perform and tend to broaden their interests.

Demonstration programs of music workshop activities are used frequently as orientation for professional trainee groups in the hospital. These demonstrations describe the program, its goals and problems, and participation in them affords patients considerable pride. When patients are taken into the community to perform, they are almost invariably a credit to the hospital in behavior and performance. They illustrate to many kinds of club and church groups that "patients are people." Sharing in the "social hours" at the meetings of these groups increases the patients' ease and security in functioning outside the hospital.

Large group performances for holidays, special patient events, and an annual music and art department show are used to involve patients of many types and levels of skill in music and in allied arts (scenery, dancing, dramatics, and management). Patients work with staff personnel in the planning and coaching for these shows. By-products of these activities, in the workshop and out, frequently include reduction of bitterness and brooding, improved concentration, better attitudes, a feeling of relationship with other patients in the hospital, and participation in activities typical of the world outside the hospital. This serves as a bridge for returning to the community, and affords a "richer way of life" for those who must remain hospitalized.

Case Histories

CATEGORY I. Talented patients with professional training and experience who have little hope of discharge. (Principle: to use what is healthy in each individual to maintain his best level of behavior and enjoyment.)

Case 1. A and B, both males past middle age, are excellent pianists. A, divorced, had switched from clerical work to selling, and eventually to entertaining in a night club. He was originally committed by his father in 1937, with a problem of acute alcoholism. Discharged in 1942, he was unable to keep from drinking and returned voluntarily in 1947, with gradual onset of Korsakoff's psychosis. He has adjusted well to hospital routine and seems to find his greatest pleasure in playing for patients.

B entered the hospital as a voluntary patient in 1947 and has remained as a committed patient since 1949. His original diagnosis of psychoneurosis, mixed type, was changed in 1956 to manic-depressive reaction. His brother, Dean of Men at a small teacher's college, visited the patient frequently at first, and tried to help him reestablish himself outside, but now he seldom visits. B had been a fairly successful musician, secretary of his local chapter of the musicians union, and well-known in the entertainment field. He carried on other business with some success; first as a clerical worker for a trust company, and later, with a real estate concern. Subsequently, he "free-lanced" in real estate, but not successfully. Prior to hospitalization, B had a history of constant somatic complaints. These complaints have continued, although careful examination has not substantiated any physical cause. It was believed that an unsuccessful common-law marriage left B with strong feelings of guilt and inadequacy, leading to two reported attempts at suicide.

A and B form an excellent two-piano team which is acclaimed throughout the hospital. They play for community singing, are the backbone of the dance orchestra, and serve in innumerable ways for the entertainment of patients and personnel. Both patients thrive on this recognition. Patient A maintains a fair degree of acceptance of hospital life as long as he is allowed to play the piano. There has been a gradual increase in the symptoms of his malady. Patient B has suffered consistently recurring cycles of deep depression, and what he reported as agonizing pain.

Here, then, are two long-term patients with unusual musical talent: A is lyric and very facile in arpeggio and broken chord patterns; B has a strong rhythmic thrust, full of originality. Each has failed in facing the world outside, but each has gained recognition in the hospital community and finds genuine pleasure and satisfaction in serving it.

Case 2. Patients C and D are middle-aged women, and are capable pianists. Although they prefer classical and serious concert music, both improvise well, and each has her own style. C has been diagnosed as having schizophrenic reaction, catatonic type. She has been in private hospitals several times, and has been a patient in this hospital since the early 1940's. She came to this music department in 1948 as a volunteer worker, on outpatient status, and was assigned to assist with ward programs. Her outpatient status did not last, due to promiscuous sexual involvement which led to bizarre, destructive behavior. During many months, she was confined in the continued treatment wards. After being assigned to an active treatment ward, she was reassigned for music therapy. She took part enthusiastically in the music program, practiced, played in piano ensembles, sang in church choir, and occasionally played the organ and entertained on the wards under supervision. In the late 1950's, a volunteer teacher helped in rebuilding her self-esteem by taking her to play in local music clubs where she was able, with the help of tranquilizers, to maintain a graceful and dignified composure. She played in New York City for the National Association for Music Therapy. During the last 15 years, this patient has shown an increasingly short attention span and a growing tendency to be self-centered. While she still plays well technically, she has lost her earlier sensitivity. Nevertheless, C's music is one vital asset in which she finds comfort after her periods of disturbance.

D has retained her style, her good grooming, and a consistent interest in music, dance, and dramatics. Her illness is an affective reaction in which she has seemingly reached a nonpsychotic plateau. In spite of age and some deafness, she remains sensitive in musical taste and has intellectual curiosity in all the arts. She plays in small ensembles and occasionally for creative dance groups. She is able to catch and to match mood swings of soloists she is accompanying, and has worked with foreign patients, helping them express themselves in their own folk musics. She is invaluable in theater productions, both in acting and coaching.

In 1957 and 1958, she was considered for employment in the music therapy department. In each instance, she went into a manic episode when the time arrived for administrative action to employ her. The physicians believe that the idea of a job was too threatening for her to handle. She has many privileges and enough money and family to have pleasant times outside the hospital. She is consistently quiet and reserved, and seems to be accepting her role as a long-term patient.

CATEGORY II. Learners at various levels who will probably be long-term patients. (Principle: To keep patients alert, and to develop new horizons of interest which will build healthy attitudes.)

Case 3. E is a male patient, single, and in his early 30's. He is diagnosed as having schizophrenic reaction, undifferentiated, with some birth injury suspected. His intelligence is normal. After two previous commitments in private hospitals, he was transferred to this public hospital. He is eccentric in behavior and appearance. He stammers and is easily excited to argument, at which time he is suspicious, repetitious, and resistant to reasoning. His father is dead. His mother is neurotic and presently lives on the West Coast; she rarely contacts the patient.

E began xylophone lessons in 1955 at his own request. He came to lessons regularly, practiced earnestly, and learned to play several familiar melodies. He refused wrist-loosening exercises, and ultimately dropped the activity when his mental and physical rigidity kept him from progressing. He took part in several shows, but was usually disgruntled because the parts he could handle were not important enough. He attended music appreciation sessions and turned in several well-written reports. He started violin lessons in 1962 and has continued these. He is attentive and open to suggestions. An earlier exaggerated dread of physical contact, such as is needed in teaching beginners to handle an instrument, has lessened considerably. He is working with less tension, more concentration, and is able to respond to occasional bits of humor. However, his anti-social behavior, while less bizarre, still continues. Since it is likely that he will be a long-term patient here, it is planned to prepare him to take part with others in music activities. It is something for him to do that is constructive. It should give him some sense of belonging.

Case 4. F is a married woman, middle-aged, who has little chance of leaving the hospital. She is committed with diagnosis of schizophrenic reaction with paranoid trends. She is friendly and loquacious, except for being constantly argumentative with hospital staff about not "letting" her go home. After several years of hospitalization, it is obvious that her husband intends to leave her here. Married children send her nice clothing but their visits are increasingly rare, and she dwells constantly on the "injustice" of her commitment. She entered the hospital ten years ago with paranoid ideas, and hallucinations reported by her family. She was assigned to the music department, sang with the choir and in show choruses, and has taken part in many dance activities.

F also enjoys play-acting, speech dynamics classes, and oil painting. Although she had not had previous training, she has turned out canvases prolifically since the art classes started in 1956. They are acceptable enough to be framed and hung in several places throughout the hospital. Although they are all copies, they show her own mark of individuality. She works fast, with concentration, and takes instruction well. She is inclined to be possessive about her work and to hoard it rather than to have it displayed. Once she has acquiesced to display of her art, she is proud and pleased. She is sometimes secretive about signing her canvases. She consistently directs recognition of her skill in painting to the focus of "going home," however unsuitable the occasion for discussing it.

F is a valued ward worker and is always willing to help in any department project. Presently, she is quite proud of being the choir secretary, a job in which she is very efficient. While none of these activities compensates enough to keep her happy in having to remain in the hospital, they fill her time in constructive ways. She seems to exist in a fairly contented mood as long as she is active.

Case 5. G is a 55-year-old male (single, schizophrenic reaction, undifferentiated type) who has consistently been an introvert since he left college during his freshman year. He lived alone for years, rarely bothering to dress. However, at some time, he learned to play the violin fairly well. When he was assigned to music early in 1958, he was very confused, would tolerate no conversation, and preferred playing alone, without accompanist. As he lost fearfulness, he began to enjoy weekly sessions of duets with an elderly male volunteer violinist. Through this, he was first drawn into small ensembles and later into orchestra. By 1960, he would play violin duets with other violinists in the department. The biggest musical hurdle, beyond his reticence, was a tendency to race tempo, and to skip measures and entire sections in a frenzied way. Constant efforts by staff members, plus the experience of playing with groups, helped him develop steadiness. He has participated in many programs. He gradually came to respond to, and occasionally even initiate, conversation; he has also developed the ability to make choices.

He has a strong will. When he has refused to take part in some activity, nothing will move him. Occasionally, he has accepted an invitation to join folk-dancing, but he has refused every other form of dance movement, even morning relaxation exercises. He seems "at home" now in the department, although he continues to be seclusive. He absolutely refuses to leave the hospital grounds to do programs.

CATEGORY III. Short-term patients with talent and professional experience who have been helped toward discharge by music activities while in the hospital. (Principle: To develop skills which will assist them avocationally or vocationally when they return to the community; and through gratifying activity to lessen anxiety while hospitalized.)

Case 6. J, a 33-year-old Negro, was admitted in 1958 with paranoid personality characteristics and a drinking problem. He was placed on convalescent leave after eight months' hospitalization and was discharged in absentia in 1959. He was separated from his white, French wife who had returned to France with their three children. He played saxophone, flute, trumpet, and piano, and led, organized, and managed professional popular-combo groups. He had some success making recordings abroad, but did not succeed well in the United States. J reported that his wife showed little notice of the pressures on him and his resultant fatigue. He also reported that their problems, caused by racial differences, became acute in this country. Debts increased, as did his nervous restlessness, his drinking, and his depression.

At the hospital, J regained self-esteem. He was active and helpful as an entertainer and stimulated other patients to participation in "jam sessions." Although inclined to be a little arrogant and demanding at first, he overcame this type of behavior as he earned recognition for his talents. Besides helping himself, he helped many other patients.

J did composing and arranging while in the music clinic, and wrote a suite with which he had help in transcribing from piano to score. He recorded this composition while on pass from the hospital. Later, on longer leave, he kept in touch with the department, brought his record to play for friends in the clinic, and also brought his band to give an auditorium concert. At that time, his doctor reported that he had adjusted well, had not been drinking, and that no paranoid ideas could be elicited. The medical comment on his discharge mentioned the considerable help J had found in using music facilities to rehabilitate himself.

Case 7. K was an attractive, blonde, 27-year-old, single girl who worked in the music and art department for five years after a short previous commitment in a state hospital. Her parents were divorced, and the patient stayed with her mother and stepfather. The stepfather was good to her, but died the year before her hospitalization. The patient's mother was unstable, highly neurotic, and immature. K was shallow, childish, vain, aggressive, and quick-tempered. Diagnosed as schizophrenic, chronic undifferentiated type, she spent two periods in the hospital. During the first, she had a series of electroshock treatments, and later, insulin coma therapy, but was reported to have shown little improvement. A lobotomy in 1955 was apparently successful, although her emotional controls remained obviously weak.

In addition to being physically attractive, she had unusual talents both as a dancer and singer, which had been exploited by her mother when she was a child. She was used in several hospital shows, although often in secondary parts to help control her tendency toward prima-donna behavior. She sang in the church choir, also. K received extended passes, and became increasingly irregular in attending music activities. She stopped her vocal lessons and was not inclined to be involved with performance obligations on the wards. However, she came frequently to visit the music department while on pass. She was discharged in 1956 after a series of extended passes. She was readmitted in 1957 after having lost a premature baby. She remained hospitalized until she received an extended pass in 1961.

This discharge had better results. As she became absorbed in the community, her freedom from the hospital seemed to give her a healthy independence. She lived away from her mother and was given support by volunteers who had heard her sing, both at the hospital and on programs given in the community by the hospital music department.

Through these contacts, she was hired as a paid church soloist. In 1962, she married and seems to be secure within her family and community.

Case 8. Patient L, 54, was an avocational violinist of professional calibre, who was employed by the state in mimeophotostatic work. He remained in the hospital for only a few months in 1956. He had been married for 20 years and was devoted to his wife who had had three manic-depressive episodes. The wife also suffered from Parkinson's disease. There were no children.

L was never very interested in his work but enjoyed his music activities. He played regularly with two symphony orchestras, taught violin at home, and played wherever possible in small chamber music groups. On admission, he was euphoric, showed flight of ideas, and was delusional and overactive. After electroshock treatments, he was assigned to the music department where he was allowed to participate in all of the music activities he enjoyed. He was particularly grateful for the atmosphere of interest in cultural things. His hours in music were devoid of the pressures of his wife's illness and the job in which he was not interested. Through his acknowledgment of the talent of others, his own euphoric tendencies came into more realistic focus. He organized his time, his activity was structured, and there was sufficient goal demand to keep him alert.

CATEGORY IV. Short-term patients who were learners at various levels, and who felt they were helped toward recovery by music. (Principle: To stimulate avocational interests; to fortify self-esteem; to establish good work habits; and to provide socialization.)

Case 9. M was in his early 30's; his diagnosis is schizophrenic reaction, chronic undifferentiated type. He had had several short periods of hospitalization, during which he had shown marked, though gradual, progress. In his first hospitalization, he was tense, anxious, confused, slow in responses, and did not exhibit feelings of self-worth. He "froze" when confronted with problems. Although he was conscientious in practice, and stated that he wanted to learn music, he was slow because of his nervousness and self-abnegation. He was helped by a second, longer hospitalization, so that he was able to participate in several activities with ease. He has become interested in music fundamentals and theory, and has learned to play the saxophone well enough to perform solos. In piano, he is at the Grade II level.

M has used the activities of music and art to good advantage in developing a sense of security. His tenseness seems to have disappeared in a relaxed, friendly acceptance of his rightful place in activities, and in the friendships he has formed. His self-assurance seems now to be well established. Presently, he is on long pass preliminary to discharge.

Case 10. N, in his late 20's, has no psychosis, but is a drug addict. He is neat, pleasant, and well-poised. His reserved manner, at times, makes him seem seclusive. There were no apparent contributing factors in the family background. N began drugs as an escape from depression over the onset of tuberculosis, which is now arrested. His present health is listed as "good."

N entered the hospital voluntarily early in 1960, remaining only a few weeks. When out on pass, he reverted to his addiction and returned in May 1960, evincing a sincere intention of conquering his habit. He was certain that his remission was caused by leaving the hospital too soon. N accomplished an amazing amount of learning while in the hospital. He began guitar lessons and practiced diligently. He became skillful enough to play with a group after three months. In piano, his teacher found him to be an eager and rapid learner.

N also took bassoon lessons. He is reported to have been persevering, able to practice independently, amenable to guidance, and ambitious. All his teachers remarked about his tendency to work quietly, but they felt there was no reticence when he needed to communicate about his lessons. His questions were always good. He expressed appreciation of the music skills he had acquired, stating that they would help him avoid further trouble with his addiction after his discharge.

Case Studies

Case Reported by Wayne Ruppenthal

Because of the drawling speech that came from this tall, angular, 26-year-old man, it seemed appropriate and natural to call him "Tex," as he requested. The apparent difficulty was that Tex couldn't walk. He first came to the music therapy clinic in a wheel chair when his doctor was showing him around the various adjunctive therapies in the hope of finding something that would kindle a spark of interest in the patient. In the staff conference, his paralyzed legs had been of central concern for in none of the many tests and examinations he had been given was there any organic explanation for the paralysis.

Tex talked of many things he had done. In the recreation therapy clinic, he was reminded of various spectacular participations in football and basketball, and how he had been a cowboy and a rodeo star. In the woodworking shop, he was reminded of some construction work he had done. In the bowling alleys, he was sad because his paralyzed legs would never again allow him to carry a bowling team to a decisive league victory.

In the music therapy clinic, he was attracted almost immediately to a string bass that was in the group room and remarked to the music therapist that he had played "bull fiddle" with Tommy Dorsey's Orchestra. The instrument was brought over to his wheel chair and leaned over to a position where Tex could "play" it. At that point, it became apparent that he had probably never had his hands on such an instrument before. But the doctor and the music therapist both accepted his excuse that he was "out of shape" because he hadn't played for several years and agreed that "no one could play the instrument in a wheel chair." But would he like to come to the clinic to "fool around" with it a little each day? Tex said that he would.

Tex wheeled himself into the clinic daily for several weeks to "fool around" with the "bull fiddle" and, although it was now a certainty in the minds of the staff that he had had no previous musical training or experience, his efforts were accepted and no one attempted to "teach" him. The only comments that were made were on the order of, "It sounds like you're beginning to get back in shape, Tex."

The "Dance Combo" consisted of six patients with an instrumentation of three saxophones, piano, guitar, and drums, with the music therapist playing trumpet. Their rehearsal hour preceded the time when Tex came to the clinic, and the therapist noticed that once he had arrived early enough to hear the last few minutes of the combo rehearsal, Tex consistently came early and, in a far corner of the large room, attempted to pluck the bass along with the combo.

After several days of this, the therapist remarked to Tex that it was a shame that he couldn't stand up and play, for the combo surely needed a bass to fill out the rhythm section, but, of course, this wasn't practical unless some way could be found to get him supported in an upright position. The next week Tex ventured the suggestion that maybe if he had crutches, he could be supported by them, lean against the grand piano, and thus join the combo. The crutches were provided and Tex became a member of the group.

Fortunately, Tex began to develop a fair rhythmic sense, but even his relatively good "ear" for pitch discrimination didn't fully compensate for the fact that he couldn't read music. But he had never dropped the facade that had been erected by his "Tommy Dorsey story," and the staff felt it would be unwise to confront him. The impasse was broken one day when the chief music therapist, who was known by Tex to be an excellent violinist, was putting his violin in its case, and remarked that he was going to take a violin lesson. Tex said that it seemed odd for someone so expert to be taking a lesson. The reply was, "You and I know that each of us needs to go back occasionally and refresh himself on the basic fundamentals of our instruments." The next day Tex asked him if he would have time to "take me back through a review of the basic fundamentals, since we're both string players." The day came when Tex came to the clinic on crutches and later on he was able to discard the crutches.

The patient who had been playing bass drum in the "Concert Band" left the hospital, and Tex accepted the role of bass drummer with no hesitation. Rehearsals went well for several days, and then, suddenly, in the few moments between numbers, Tex groaned loudly and fainted. Tex revived--the center of the group's attention. The next day Tex fainted again, and the music therapist noticed that, again, he had fallen into a large, cushioned chair. This time, although there was evidence of group concern, the therapist went on with the rehearsal, and when Tex "came to," he got shakily to his feet and finished the rehearsal.

After the rehearsal, the therapist talked with Tex and suggested that he talk to his doctor about these fainting spells because, if they continued, another bass drummer would have to be found. "We will be playing for quite a few things before an audience in the near future, and we just can't take the chance of having a concert disrupted by a fainting spell." He never fainted again at rehearsal or concert.

Tex was ultimately discharged from the hospital able to make a satisfactory readjustment to society. He had learned to satisfy his tremendous need for attention by earning it rather than using his former devices--paralysis, fainting, and grandiose fabrications about his past accomplishments. Many people in the hospital had a part in his treatment, but among the most effective were his doctor, who first detected his interest in music, and the music therapists who were willing to accept Tex at his level of functioning, and help him to supplant his inappropriate attention-getting devices with behavior patterns that earned the gratification he needed.

Case Reported by Gerald Spry

The patient was a 32-year-old, unmarried male. He was admitted in 1964 of his own accord because he felt that part of himself was in another world trying to solve some undefinable problem. He complained of listlessness and chronic fatigue, and constantly had feelings of inadequacy. He seemed to be very introspective, preferring books to human contact. The patient had two dreams that bothered him. The first one was a choice of two paths. He always took the wrong path and ran into a crowd, whereupon he was attacked by a vicious dog. In the second dream he found himself, partially clothed, in a crowd. He tried to escape from these people without being seen.

The patient's relationship with people seemed confused. He liked people, but at the same time felt uncomfortable and uneasy with them. He was uncomfortable especially when with females who frightened him. The patient requested music therapy with specific emphasis on drum lessons. His referral sheet listed his diagnosis as "early schizoid." The specific objectives of music therapy were to offer structured tasks and maintain interpersonal distance. It was also requested that tasks be structured to create situations in which the patient must make decisions. A situation was set up which required the patient to make a decision between taking lessons on only the snare drum, or on the complete trap set. It was carefully pointed out that he could later reverse his decision with no adverse consequences. Then four different lesson times were offered to the patient. Here again, the patient had to decide upon which time to take his lesson. Then the patient picked out a practice time for each day. He was told that he must attend these lessons and practice periods at the designated time.

The patient decided to take lessons on the trap set. During his first lesson, a very simple rhythmic pattern was presented, playing the snare drum with brushes on the first and third beat, with the bass drum playing on the same beats. He practiced this alone and then with records. In his first week of practice, the patient was able to accomplish this rhythmic pattern, thus achieving the short-term goal of immediate ego support. In each succeeding week, a simple situation was set up to give this patient the support he needed.

The goal now became that of helping the patient to make decisions on his own, to continue the development of ego support, and to direct the patient in his relationship with other people. This relationship was greatly improved through participation in the hospital choir. Eventually, his feelings of uneasiness lessened to the extent that he was quite comfortable in a group situation.

Even though no extensive musical ability was required, a great deal of initiative was necessary to continue his daily lessons and practice. The musical goal on the drums was to play four different rhythmic patterns simultaneously. As each pattern was introduced, more mental concentration and physical coordination were required. The patient had a difficult time in maintaining a schedule. It was pointed out to him that he only deprived himself when he failed to be on time for his lessons, or did not appear at all. In order to make the patient attend to the situation at hand, more and more of the environment was structured. Gradually, more concentration was required of the patient.

The opportunity for creativity was available. By composing his own drum solos and rhythmic patterns, the patient gained much needed support. Eventually, his progress was sufficient to enable him to join the hospital dance band. Many times, the patient would come to his lessons expressing hostility and aggression because of some incident that had taken place earlier in the day. By being forced to concentrate on his lesson, the patient released this energy in a socially acceptable manner.

The value of this program to the patient after dismissal from the hospital could be good, not in monetary terms, but in ego support. The therapist encouraged the patient to continue his music after his release from the hospital.

From the start of the therapy program, the therapist had as little contact with the patient as possible. The therapist encouraged him to develop and try many things. Decision-making and initiative were left to the patient. It was important for the therapist to structure situations so the patient would receive the desired support, and at the same time, achieve this support by his own motivation. The therapist, after conferring with the doctors, set up a situation in which the patient achieved only failure. The purpose was to show that failure or a wrong decision would not produce disastrous results, but only temporary setbacks.

Eventually, it was decided to announce to the patient that he was going to be discharged in two weeks. Observations of his reactions were recorded over the two-week period. Within one week, he regressed into an almost catatonic stupor, but finally eloped from the hospital.

Cases Reported by Richard Gray

Case 1. A was a 37-year-old male who exhibited a dissociative reaction. He never really knew his parents. When he was a very small child, his father expelled him and his mother from their home. His mother died when he was five. He feels he never had any real home. He spent his childhood with a very strict grandmother. When he was in high school, he lived with an aunt and uncle who were frequently brutal to him. During World War II, he joined the Navy and saw submarine duty. He was married while in the service. In 1944, he became depressed, drank poison, and was hospitalized until discharge in 1945. He was divorced from his first wife about a year after discharge from the service.

Following A's discharge from service, he complained of blackout spells. There were some periods of irritability, depression, and nervousness which precipitated considerable drinking. According to the patient, he stopped drinking for three years and the blackout spells increased in number. Another marriage of short duration (two weeks) was followed by a third which is in the process of dissolution at the present time. The patient has been hospitalized six times with intervening periods characterized by marital discord, nervousness, amnesia, and alcoholism.

The purpose of music therapy with this patient was to develop interpersonal relationships. During the immediately previous hospitalization, he was referred to music therapy, the hospital radio station, and manual arts therapy (woodworking). He worked sporadically in the radio station and in music, although giving obvious evidence of his flare for entertainment. He played some of his country-western compositions for the music therapists, and sought their criticisms. In woodworking, he made a combination electric guitar and bass which he played well.

During the most recent hospitalization, the patient's physician specifically requested that demands be made on the patient to improve his guitar technique. The necessity of playing in the hospital instrumental group which "read music" was explained to the patient who had previously played only "by ear." This was done for the following reasons: (1) the physician felt that strumming for his own pleasure was contraindicated; and (2) learning to read chord symbols and increasing his knowledge of chord fingerings would make other types of instrumental groups available to him when he was discharged from the hospital.

The patient was expected to keep his appointments for lessons, private practice, and band rehearsals. When he was absent, the ward was called and the physician was notified. Although he resisted this structure, the patient made musical progress, and the therapist was able to establish good relationships with him. The patient never initiated any discussions with music therapists regarding somatic complaints, although the psychiatrist had indicated that this might occur.

The patient now has been discharged with the psychiatric recommendation that any readmission be based on a complete reevaluation, since it is felt that the original diagnosis should be set aside in favor of one which would incorporate some indication of a personality trait disturbance.

Case 2. D was a 30-year-old man who worked as a farm hand. His early life was described as normal. He played guitar and sang for social events. He enjoyed teaching children to play. D's illness began in 1953 while in the armed forces. At that time, he was assigned to clerical work. He began withdrawing and showing feelings of inferiority. At a station hospital, he was found to be hallucinating and smiling inappropriately. His illness did not respond to electroconvulsive treatment. The diagnosis was chronic, severe, catatonic schizophrenia.

Following three months of hospitalization, however, it was possible for him to make a marginal adjustment at home. After five years at home, he was readmitted to this hospital for reevaluation and treatment recommendations. There was no apparent change in his condition. It was during this more recent admission that he was referred to music therapy. The treatment aims were to provide closely supervised activities, encourage conversation, and activate friendliness. The patient, initially, was given guitar lessons and subsequently took lessons from a music therapy trainee.

D came to lessons accompanied by the nurse or nursing assistant who participated in order to provide additional encouragement for him. He was allowed to take the instruction book back to his ward so he could practice there. During lessons, D played the chords of familiar songs while the therapist played chords and sang the melody. He declined to join a group of other guitar students, saying that he was not proficient enough. Efforts to interest him in music fundamentals proved fruitless.

Several weeks after music therapy was initiated, he began to speak more clearly and express definite likes and dislikes. When the music therapy intern's training period ended, the staff therapist took over the lessons and met regularly with D.

Gradually, increasing demands were made on his ability. He now played chords while the therapist played only the melody. He was invited to play duets with the therapist on patient recitals and he was able to do this.

The patient has left the hospital, and at last report was making a marginal adjustment at home.

Cases Reported by Ray Glover

Case 1. The patient was a 33-year-old female, a divorced ex-stenographer. She was admitted to the hospital because of confusion, disorientation, and depersonalization. She was the second of four siblings of a family of moderate economic means. She had no history of unusual infancy and childhood. Her school life was described as having been lively, active, and jovial. She completed two years of college, but stopped college after she was married. She was extremely interested in music, and played the electric organ. The husband believed that his wife's mental illness started five years before her admission to the hospital, although he did not recognize the symptoms at the time.

The following is a summary of her psychological examination. The patient is a frail and polished looking young woman who appears somewhat preoccupied, withdrawn, and seclusive. She appears hypoalert, well oriented in all spheres, although preoccupied to the extent of occasional inaccessibility. She seems to be within the average range of intelligence, with a fund of knowledge adequate and corresponding to her education. She has good memory for both recent and remote events. Her thought processes are predominantly relevant, coherent, and understandable, though some amount of regression, looseness, syncretism, and autism are noticeable. The patient periodically mutters to herself, interpolating in the middle of an answer. She also uses cliches, irrelevant and somewhat disjointed proverbs, and jokes to fill in some of her semi-oriented answers. She is excessively preoccupied with somatic hallucinations and expresses concern about her cheek bones drawing together, her right arm shrinking, and her toes expanding. Affectively, the patient is rather bland. There are marked signs of regression in thinking, behavior, and affect.

The patient was started on a compulsive regime of activities consisting of cooking, ward occupational therapy, piano instruction, and choir. Group psychotherapy was recommended for a later date. This recommendation was followed about a year later with poor results. She was also placed on a chemotherapy regime. Her adjunctive therapy prescription indicated the need for alleviation of "feelings of inadequacy, confusion, and improvement of self-esteem." The attitude towards her was to be kind firmness. The following are excerpts from progress reports:

The music therapist reported, "She practices the piano once or twice weekly and is happy and cooperative. She is regular in attendance at choir and socializes fairly well. She is very talkative about trivial things. She has sung several solos and does very well. She seems to 'block' occasionally while playing the piano. Otherwise she plays well."

A later report from the music therapist stated, "Patient seems to 'block' when making up her own piano arrangements. She is assigned duet work in an effort to give her something concrete by playing what is written. She does this satisfactorily. For the most part, our personal relationship has been a happy one. However, when I 'clamp down' and make her play correctly, I am not too sure how well this is received, and she seems at times to think she was right all the time. She is regular in attendance in choir, socializes fairly well, tells a lot of pointless stories, seemingly as a result of her nervousness. She does not face reality."

A report six months later stated, "She enjoys playing duets most without being corrected and usually does not remember the correction the next day, but plays it in the same way as before. Generally feels she is right about the music and can do no wrong. However, I feel that perhaps a little progress has been made. She has not been so 'flighty' in choir the past few months. She gets along well with the group and seems more outgoing. She stopped telling her pointless stories for a while, but occasionally tells one now."

It was reported at a progress evaluation meeting that the patient's husband was considering a divorce and that he had no interest in the patient. The patient was not willing to face this fact and still maintained that her marriage was a wonderful thing and that life was a "bed of roses." One day as she entered the music clinic, a record by a popular female singer was being played. One of the songs, "It's the Talk of the Town," included the phrase, "everybody says you've left me . . ." This song visibly disturbed her. The next song was "He's Funny That Way." After the phrase, "I've got a man crazy for me . . ." she screamed, "Liar, Liar!" and became more disturbed. Half way during the third song, "Say It Isn't So," the patient ran out the door. As soon as she was in the hall, however, she assumed the facade that everything was wonderful and thanked the therapist for the music. It was believed that the words to the songs made her realize the truth of the situation between her husband and herself.

At the time of this writing, the patient appears more stable although still suffering from occasional delusions. She sings in a female vocal group and the choir, and seems to get satisfaction by serving occasionally as accompanist for the group. Her piano playing is satisfactory as long as she uses written music.

Case 2. The patient was a 33-year-old, obese male whose occupation was listed as laborer. He was a veteran, single, and a high school graduate. He was transferred to this hospital after spending a year and a half in another state hospital, "because he was a trouble maker and potentially dangerous . . . and should be hospitalized in a maximum security building." This was done, but after a year he was transferred to an open ward.

The patient was the eldest of two children. The father died of cancer when the patient was 16 years old. It is said that he felt quite close to his father. He never got along well with his mother because she "worried too much about little things such as what time he would come in at night." He says that he had pretty much his own way at home until his younger brother was born. He believed that this was the cause of considerable friction with his brother. He spent most of his time with the father, assisting him with his work and joining him in recreational activities, while the brother spent most of his time with the mother.

During his high school days, he was frequently truant. He was finally sent to a military school for a year, where he found the restrictions irksome. During his early years, he was regarded as a fat boy by his schoolmates and suffered considerable teasing. He states that when he was around 14 years of age, he suffered a head injury, after which he was dizzy. About a year later, he began to suffer from headaches which have become increasingly worse during recent years. He worked at many jobs after he left school, but always quit because of the restrictions of regular hours or because of his headaches. He was inducted into the army but was given a medical discharge after three months because of migraine headaches and his refusal to have an operation for a hernia.

The patient first began to admit to himself that he was having difficulty in his social adjustment after he was involved in the fatal shooting of a life-long friend. He stated that while at his friend's apartment visiting, they drank considerably. During the evening, the friend attacked him physically on several occasions and when he attempted to leave, his friend interfered. The patient drew a target pistol and fired at him. The bullet struck the friend, causing his death. He was given a six months sentence in the county jail, but was granted a special parole in order to seek medical treatment.

After his transfer to this hospital, he made a good adjustment and his headaches subsided. The patient's first contact with the music department concerned the repair and upkeep of the record players and other electronic equipment. He insisted that this was one of his jobs and that no one else was to interfere. It was later learned that the patient had once played clarinet, although he could not be considered an accomplished musician. He became interested in a small combo that was forming and was assigned to participate in it. The patient was arrogant, self-righteous, and at times, uncooperative. He would not admit mistakes when confronted with them. He played louder than anyone else in the group, with a very harsh tone. This was tolerated. As time went on, the patient refined his playing so that it was more acceptable. He purchased a saxophone from a local music store, and his playing became more refined. He finally was able to accept the fact that he made a mistake and was willing to correct it. He became interested in arranging and transcribing music for his instrument, and in adding harmony lines. Instead of playing the melody himself, he relinquished this to others at appropriate times and played the second or third part.

It is believed that this patient was helped greatly by the subtle pressures from the group and from the therapist. This pressure was one of praising appropriate responses and encouragement in acceptable areas until the patient himself became aware of the situation and decided to change. The patient was dismissed from the hospital in 1957 and is, reportedly, doing well.

Cases Reported by Herbert Goldsmith

Case 1. P, 16 years old, was admitted to the hospital in 1963, after a chain of events was climaxed by her running away with a boyfriend and spending the night in a vacant house trailer. Upon being apprehended, she spent two days in jail prior to being committed to the state hospital by her parents. Several months after her admission, the patient attempted to escape from the hospital with two other girls, and upon her return, was placed in a locked ward adjacent to the music therapy rooms. The doctor prescribed music therapy for the patient with goals of resocialization through group activity and increased self-esteem through individual therapy.

The patient's first experience in music therapy was singing in the large mixed chorus. Although reluctant at first to attend rehearsals, she responded to the therapist's offer to help her individually with the alto part until she became more familiar with choral music. As the patient began to feel at home in music therapy, she volunteered to distribute music and to do other jobs. After one month in music therapy, P asked if she could sing in the small chapel choir. She was told that this would mean hard work, but this challenge appealed to her. The patient did well in chapel choir and took special pride in being the youngest member of a select group.

Individual therapy was continued by helping the patient master her part in choral music. The patient and therapist established good rapport that led to the therapist's suggestion that the patient learn to play an instrument. At first, she resisted, thinking that she would fail in this endeavor just as she had failed in several high school subjects. After much encouragement, she decided to try flute, "just to see if I like it." Success came slowly and with some difficulty. At first, she wanted to stop the lessons, but the therapist insisted that she continue. Gradually, she came to love playing the flute and practiced every evening on the ward. Later, she began teaching another patient flute fundamentals under the supervision of the therapist.

Music therapy was the only therapeutic medium to which the patient was assigned. During this period of several months, she became more stable as well as confident of her own abilities. She lost much unbecoming weight and learned makeup and hairstyling techniques from the music therapist.

In August, 1964, the patient was furloughed from the hospital. She now returns for monthly visits to the outpatient clinic. During these visits, she always comes to the music therapist to report the progress of her flute study. Her parents have purchased a flute for her, and she appears to be doing well in her lessons. It is reported that she has made good adjustment to her environment.

Case 2. D, 33 years old, was hospitalized in 1959. The patient was divorced and had one child who lived in another state. She was committed to the hospital by her parents. In February, 1963, she was placed in an intensive treatment program, and music therapy was included in this schedule. In March, 1964, it was determined that D was not benefitting from the intensive psychotherapy program. At this time, she was dropped from group therapy but continued in music therapy. The specific goals prescribed were to heighten her affect which was much flattened and to provide an opportunity for resocialization.

In April, 1964, the music therapist suggested to the patient that she begin lessons in an effort to develop her pleasant singing voice. She was exceedingly reluctant to undertake voice lessons and yet was obviously flattered by the therapist's opinion of her ability. She finally consented and sessions were begun on a weekly basis. The patient advanced quickly. She learned Italian diction and mastered a group of Italian songs. At present, when the patient begins the study of an Italian art song, she translates it herself with an Italian dictionary. This enables her to understand, interpret, and communicate better the meaning of the song she sings.

When the patient began studying voice, she was preoccupied and distant, often stopping in the middle of sentences and constantly wringing her hands. Her eyes were frequently downcast, her brow furrowed, and she appeared to have little confidence in herself or in her vocal ability. Six months later, the patient's appearance and attitude were changed. She looked younger and prettier, having taken an interest in her own personal appearance. Her conversation was lively and interesting. She has gained a great deal of self-confidence and has made a marked adjustment to her environment. A full-length recital is planned. She is eagerly looking forward to this performance. In a recent staff conference, the patient's doctor indicated plans to furlough her soon after she completes this recital, because she has improved so markedly during the past six months.

The praise the patient has received from people who have heard her sing has convinced her that she does have a relatively good voice. She feels that she has accomplished something meaningful and that her talent will allow her to contribute something worthwhile to her community once she returns.

Case 3. This 18-year-old female, first admitted to this hospital in March, 1961, is the daughter of a deceased dentist who was once a member of this hospital staff. The patient had been living with her mother and her 80-year-old grandmother. A long-term authority complex, beginning with the relationship with the father, and continuing with the relationship with the mother, constitutes, probably, the significant background of her past and present behavioral disorders. The patient has acted out against authority and authority figures in various ways--by running away, truancy, promiscuous sexual acting out, and hostility and violence. The patient's impulse control has been further weakened by chronic brain syndrome (CBS) associated with psychomotor epilepsy. She actively resents authority and often reacts against authority by aggression or through epileptic seizures. At the time of admission, the patient's adjustment had deteriorated to a psychotic level, and it was found that she was quite difficult to manage on the ward, being both obstructive and destructive. She associated with other girls with similar backgrounds who expressed their conflicts and impulses in similar ways.

The music therapy treatment goals were to help satisfy, in a nonthreatening, nonprovoking way, some of the patient's dependency needs, including her need to relate to parental figures and her need to find an acceptable source of authority. The patient was assigned to individual therapy and to several forms of group activity. The individual therapy provided the therapist with an opportunity to develop rapport on a nonauthoritative level and also provided for dependency development. The choir became a real testing ground for acceptance of the authority figure. Her assigned job of choir librarian offered her a feeling of closer relationship to the therapist, yet she had to follow the directions of the therapist and fulfill the demands placed on her in a socially acceptable manner. A folk dance group provided an opportunity to teach her acceptable ways of acting out frustrations and aggressiveness while continuing to accept the authority figure. A music appreciation class provided an area for supplying satisfaction of dependency needs while developing personal relationships, and finding acceptance of her ideas and concepts within the patient group.

Since the patient had had previous experience playing clarinet, it was decided to assign her to one of the instrumental groups. After several months in these activities, an evaluation by the psychiatrist showed that she had made marked improvement and adjustment to her environment and was much more amenable to authority figures.

While acts of extreme violence have occurred from time to time on the ward (which include exhibitions of jujitsu, in which several doctors were victims), this patient has never resorted to this form of acting out in music therapy. At times, she attempts to provoke the therapist into rejecting her, but in the main, there has been decided improvement in her adjustment. Seizures, violent acting out, and aggressiveness have diminished greatly. At present, the patient is being considered for placement in the hospital school program, because it is believed that her adjustment warrants this further step in her rehabilitation.

Case 4. A 32-year-old, divorced patient was a voluntary admission to the hospital in March, 1963. At the time of admission, he was very confused and stated that he had come to the hospital because of a loss of ability to concentrate and ideas of self-destruction. He had guilt feelings about a previous marriage and believed that this contributed much to his illness. His intelligence quotient was found to be 144. The patient had nearly completed four different undergraduate degrees. He stated that he wished to attain high goals in life, but at the same time, appeared not to assert himself in college work. In the past, he has been hallucinatory and delusional. At present, he denies any hallucinations, but it is thought that he still continues with some type of autistic thought. He is an accomplished musician, his principal instrument being French horn.

Since September, 1963, the patient has been in intensive psychoanalysis. He was assigned to music therapy by the psychiatrist, and the goals were to develop ego strength, to provide supportive therapy, to improve socialization, and to provide intellectual stimulus.

Initially, the patient was apprehensive and very reluctant to participate in music therapy activities. He was finally persuaded to join an advanced instrumental group on a trial basis. Gradually, he overcame his anxiety and began to be cognizant of his place and importance in this performing group. The second important step in the patient's progress was made possible through the formation of a chamber music ensemble. This ensemble was comprised of five patients, all of whom were highly intelligent and musically proficient. As a member of a small group, the patient had more opportunity for individuality, and the importance of his role within this status group increased. Through this group, he was continually stimulated and challenged with a learning situation that was appropriate to his intellectual capacity.

Following several hospital and public appearances, the patient's anxiety regarding performing in public diminished to the extent that he requested solo work whenever possible. His first solo was a performance of special music for a chapel service. Some anxiety reappeared at this time, but subsequent solo performances lessened these reactions.

The patient has been participating in music therapy activities for approximately a year. During this period, his interests have branched into other music therapy and hospital areas. He appears to be enjoying these new activities. There is a marked improvement in both his personality and his music abilities. He appears to be less confused, and his ability to concentrate is much improved. His willingness to undertake responsibility and contribute in an individual manner are evidence of his improvement. It has been recommended that this patient continue in programmed music therapy activity for the remainder of his hospitalization.

Cases Reported by Carol Collins

Case 1. B was referred from a "total-push" treatment ward for long-hospitalized women. She was receiving electroshock and activity treatments. It was difficult to communicate with her because of her hebephrenic chattering. When the doctor heard her playing chords on the piano, he turned to the music therapist saying, "I don't know what she will do; she might run away or anything, but I'll be responsible."

The therapist first took the patient for a walk during which the conversation was completely unproductive. In desperation, the music therapist stopped by the recreation hall and sat down at the piano. When she began to play, the patient "ad-libbed" an obligato in the treble to the "Chopsticks" accompaniment. B played at least a dozen improvisations. During exploratory sessions, the therapist discovered that the patient not only played the piano and danced, but could imitate any song style desired, and could sometimes make up her own words, depending on how well she was in contact with reality at the time.

When B was scheduled to sing and dance on a variety show, her ward attendants did not believe that it was possible. She seemed almost as "far out" as she always had, but, on hearing her introduction, she stepped on the stage and performed like a seasoned veteran. As the therapist became acquainted with B's behavior, she was able to understand not only B's moods, but some of the verbalizations from her hebephrenic chatter. The patient became more dependable, performed with the dance band, and became a member of the choir. This patient was among the first to react favorably to the tranquilizers and went out of the hospital as a housekeeper for one of the employees.

Case 2. D was seen on a disturbed ward by the music therapist during a tour of the hospital. Within a minute, her mood changed from elation to depression and tears. She said that she would like to sing "The Lord's Prayer" at a church service. This patient had been committed to the hospital after she had disturbed a church service by yelling and screaming accusations at the minister. Because she was so unpredictable, she was not allowed off the ward. The doctor finally gave D his permission to sing a solo at church on the condition that the therapist and attendant be with her constantly while she was away from the ward. It was planned to have her appear just for the solo and to return immediately to the hall. However, D asked to sit with the choir and remained quietly during the entire service. She was allowed to come to choir and rehearsal after this, although she was very difficult to handle. She would often leave the choir and pace the auditorium in a rage because of a new female choir member who she thought had stolen her husband.

Gradually, D became more docile and proved to be dependable as a choir member or soloist on any occasion. The music department decided to produce an operetta and she was assigned the leading role. She never missed a rehearsal and took part in three performances. During the last performance, she was so "high" that she was flitting across the stage at unexpected moments, but somehow finished the play. The next day, she was deeply depressed, but after a few days rest, she was ready to come back to choir.

D had no music education. She had perfect pitch and sight-read hymns at the piano, although she could not name the notes. She continued in choir for years, finally received ground permission, and now lives complacently on an open ward.

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PART IV

MUSIC THERAPY FOR CHILDREN AND ADOLESCENTS WITH BEHAVIORAL DISORDERS

DONALD E. MICHEL

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MUSIC THERAPY FOR CHILDREN AND ADOLESCENTS WITH BEHAVIORAL DISORDERS

Introduction

Donald E. Michel

Interest in music therapy for handicapped children has been evident for many years. There seem to be more reports concerning music therapy for children and adolescents with physical disabilities or mental handicaps than for those with behavioral disorders. However, all diseases and disabilities have emotional components. The emotional aspects of physically damaging diseases such as poliomyelitis, muscular dystrophy, and other types of crippling conditions such as brain damage in children, cannot be overlooked.

The term "adolescence" refers, in Western culture, to a developmental period in the growth of the human being. This period has its own peculiar identifying characteristics, and occurs in that time following puberty and ending in early adulthood. Even though some authorities may consider it a childhood phase, adolescence has its own identity, and therefore is treated separately here.

There are not enough articles in current literature concerning music therapy for children and adolescents with behavioral disorders. Reports of scientific research are rare.[1] A few articles illustrate objective observation and evaluation of music therapy procedures, but others are pure testimonials.

Wayne[2] reported results of an 18-month period of teaching instruments to 35 "maladjusted children." He concluded that music could be of value in relieving tension and promoting socialization among such children. Being a music educator, Wayne concentrated entirely upon teaching techniques. He did not report the background of the children's special needs nor provide evaluation of actual treatment benefits.

Since 1951, reports concerning music therapy for disturbed children and adolescents have appeared in the publications of the National Association for Music Therapy. Weir[3] described her work at a private school. Some cases were presented, but she devoted most of her efforts to describing how music therapy might help children with behavioral disturbances.

Dreikurs and Crocker[4] referred to music as communication on a nonverbal level, and described how this characteristic makes music an ideal tool for working with the psychotic child who has disrupted his communication on logical and verbal levels. He hypothesized that music may increase communication with the psychotic child, thus evoking a subtle acceptance of order so essential in therapeutic endeavors.

> Our experience has shown that music may be a profitable and therapeutic means of eliciting more appropriate emotional responses from a child who ordinarily exhibits little or no appropriate emotional response. This is done by matching the prevailing mood as nearly as possible and then gradually altering the mood of the music in the desired direction. For example, the depressed child likes quiet music and responds more easily to it. The therapist, then, beginning at this level, gradually increases the tempo and excitement of the music and by so doing induces a corresponding mood change in the child thus relieving him of his depression.[5]

Juvenile delinquency seems to be involved with "behavioral disorders" of children and adolescents. Lindecker reported her experiences in working with juvenile delinquents, pointing out the values of music therapy for those held in detention:

> Because of the very nature of the music used they seem to lose much of their physical and emotional tension and many of their inhibitions. Thus the staff is able to note behavior patterns which might not be manifest during interviews with probation counselors, psychologists, or outside agency case workers. These observations are valuable . . . when reported to the proper court or agency workers, who frequently gain added insight into their particular cases.[6]

Music therapy "acts as an acceptable means of diversion, thus easing tensions created by individual difficulties arising prior to and during detention."[7] Besides facilitating better relationships among the children and between the children and staff members, it also may develop musical ability and interest for use when the child returns to society. Music also can be helpful in modifying moods of children, both individually and in groups.

Harbert reported on her work with emotionally disturbed children in a university clinic, noting that the clinic accepted all types of handicapped children: "It is impossible to label certain children simply blind, deaf, cerebral palsied, etc., without taking into consideration the fact that in all of these children there is a degree of emotional disturbance, otherwise they would not be coming for help."[8] Several cases were recounted in which the following results from music therapy were observed: development of a sense of security and self-confidence, changed attitudes, better motor response, improved speech, and carry-over values of better communication with members of the family away from the clinic. Most of the work described was done in group activities. Harbert listed other results, including ". . . emotional release . . . growing interest in creative self-expression . . . /and/ more satisfactory interpersonal relationships."[9]

Music therapy techniques for handicapped children have been applied in public school settings. In one study, which applied objective methods of control and observation, public school consultants in special education and in elementary music planned ". . . an experiment . . . to study the effects of music on children who were exhibiting socially unacceptable behavior in the classroom. The study utilized the services of persons in the psychological, musical, and educational departments of the public schools."[10] Using a behavior check list and structured interviews to identify the disturbed children and their problems (as well as their interests), the investigators structured individual musical experiences designed to develop social awareness, provide for emotional release, build feelings of security, increase the span of attention, help the children accept limits, foster better interpersonal relationships, channel latent musical abilities, and bring about creative self-expression through music. Observation of specific classroom behavior patterns, in the form of certain unacceptable "acts" by individual children, provided the basis for measurement of change during the music therapy program. In all cases, individual children exhibited changed behavior, and the investigators concluded:

1. Children with withdrawing tendencies seemed to become more outgoing both in the musical activity session and in the classroom. Whether this trend would continue, is speculative.

2. There was not much evidence that the overt actions of a child of normal intelligence were quieted by the musical activities, but his aggressive behavior seemed to take a different form.

3. The music had a quieting effect on the acting-out, mentally retarded child.

4. In the child who was not deeply disturbed, but who was under pressure to achieve, the musical activity sessions seemed to afford relaxation and release from some of the pressures.

5. It was difficult to determine whether it was the specific music activity that was beneficial, or whether it was the personal attention the child received.[11]

Limitations of the study were noted by the investigators.

Greven[12] incorporated music into the well-accepted techniques of play therapy for disturbed children. Joseph and Heimlich[13] described how music therapy was used with "treatment resistant" children after many other therapeutic approaches had been attempted and abandoned. By having independent observers use an objective rating sheet, the investigators obtained data concerning children's ability to sustain attention, to achieve release from anxiety, to learn, and to relate to adults and/or peers. Spontaneity, self-esteem, and overall progress were also rated. Although no involved statistical tools were employed, the writers reported definite progress in most of the children. Singer[14] described music therapy procedures for children and adolescents in a cottage-plan treatment center. She used case summaries to illustrate music as a treatment medium for two disturbed adolescent (12-year-old) girls. Basic treatment aims were to develop positive "transference" and to lessen the girls' tendencies to withdraw and isolate themselves from reality. Both group and individual approaches were used. Observed results in both cases showed music therapy to have operated ". . . not as an insight therapy, but as a means of enabling them to once again re-establish human contacts and, in the loss of their isolation, to live in the world of reality."[15] While no controlled means of observation and evaluation were employed, the active participation of a psychiatrist in this setting--and his concurrence in observed results--lends some authority to this report.

Wilson[16] reported on the use of music, among other media, in the program of a special school for emotionally disturbed children. Her description of the total program, and of the positive function of music in it, is perhaps indicative of future developments. Gewirtz[17] has discussed music therapy as a form of supportive psychotherapy, and its relationship to the treatment of children. He illustrated how music may serve short-term as well as long-range goals in therapy. There are no objective data provided, but the observations of clinical practice and the logical grounds relating music therapy to psychotherapeutic principles seem convincing.

Clinical Descriptions

Clinical studies and reports have become accepted as foundations for established clinical practice in other fields of therapy, as well as music therapy. In the following pages, several clinicians in music therapy present their experiences in working with children and adolescents with behavioral disorders. Varying in objectivity and amount of evaluation, these reports provide a contemporary view of music therapy and a specific challenge for further work and research. Euper recounts recent research findings concerning autistic children and their reactions to music. Crocker describes some of her extensive experience with children, both in institutional and private referral settings. Clinical experience with hospitalized early-childhood schizophrenic children is reported by Romerhaus. Werbner describes music therapy in a children's day treatment center. Sommer relates experiences using music therapy in individual work with adolescents, while Cavallin reports some experiences with group methods in music therapy for hospitalized adolescents. Folsom and Werbner contribute case studies of disturbed adolescents in institutional settings.

Early Infantile Autism

Jo Ann Euper

Early infantile autism is a rare syndrome in which the symptoms can usually be traced back to the fourth month of life, but which often does not become disturbingly evident until the first or second year.[18] Outstanding characteristics of this syndrome include extreme withdrawal from contact with people, an obsessive need for sameness in the environment, skillful manipulation of objects and often an affectionate relationship to them, a physical appearance of intelligence, and speech pathology ranging from bizarre language, a private metaphorical system and other uncommunicative forms, to complete mutism.[19]

Autistic children appear to be unaware of persons as such; even in early infancy they fail to assume an anticipatory posture when being picked up and do not adjust their bodies to those of persons holding them.[20] In contrast to their inability to relate to people, autistic children relate well to objects (other than toy animals and dolls, which they seem to avoid as much as they do the living beings).[21] Autistic children show a high degree of interest in forms and usually perform well with the Seguin formboard; this is interpreted by some as an indication of the child's preoccupation with distinction of boundaries and self-other realization.[22] The frequent occurrence of head-banging and similar auto-aggressive behavior is similarly understood by some writers to be the child's means of sharpening the awareness of body boundaries and feeling of entity.[23] His striking ability to "spin" things has been seen as his attempt to maintain or develop spatial relations;[24] however, the autistic child does not spin himself, as schizophrenic children often do.[25] There is usually an early development of agile, well-coordinated motor behavior.[26] An outstanding mark of early infantile autism is speech pathology. Although many autistic children say words, phrases, and sentences very early, giving an impression of precocity, about half to two-thirds of them abruptly stop talking and become mute. One third of all autistic children never use speech; the ones who do usually use it uncommunicatively. Pronoun reversal is common until about age six[27] and "I" and "yes" are not used until about the seventh year.[28] Autistic children frequently use metaphoric expressions which may be meaningful to others only if the origin of the expression is known; the tracing of these metaphors is usually an involved process and is seldom accomplished.[29] Many authors have commented on the phenomenal memory of autistic children; very young ones have been known to recite a great quantity of poetry, lists of the Presidents of the United States, and other information at an age when the information probably could not be meaningful to them.[30] Also indicative of their astute memories is the obsessive need for sameness; minute, ordinarily unnoticeable changes of environmental arrangements or order of events sometimes precipitate violent temper tantrums, even though the child shows no further interest after the deviation has been corrected. Intricate patterns constructed from over 100 blocks, having one block changed at the second viewing, have been used to test this trait. Deviations are noticed immediately, even when the viewings are separated by several days.[31,32]

At the outset, it is well to differentiate between autistic behavior, which occurs in other mental illnesses and in mental deficiency, and the syndrome of early infantile autism, which is a separate classification.[33] The child with early infantile autism may be distinguished from the mentally deficient child on the basis of his normal motor development and his intelligent and thoughtful facial expression. He usually performs well on the Seguin formboard, has excellent rote memory and memory in tunes, and sometimes possesses an amazing vocabulary. There are usually wide discrepancies between the autistic child's typically low intelligence quotient (which generally is not measurable because of his lack of cooperation in the testing situation) and his performance in natural situations and on the formboard. Although autistic children usually function as mental defectives, a distinction is recommended because some have been known to "brighten up" and perform adequately.[34] Infantile autism is distinguishable from the chronic brain syndrome because of its lack of incessant pressure of impulsive hyperactivity that is so typical of brain damage[35] as well as its lack of history of cerebral or neurologic injury or illness. Further, in the chronic brain syndrome, it is usually the motor rather than the speech development which is slow. The reverse is usually true with autism.[36]

Although some writers do not distinguish autism from schizophrenia,[37] most of the advocate such a distinction on various bases. Bakwin and Bakwin state "infantile autism presents a clinical picture of its own and deserves a separate place because of the early age at which the symptoms appear."[38] Rimland[39] points out many features that distinguish the two. By definition, childhood schizophrenia must follow a period of normal development; autism, however, is present from earliest infancy. Case histories of autistic children almost invariably describe them as having excellent health and being attractive and well built. By contrast, most schizophrenic children are described as having had poor health from birth and numerous distinctive physical features not found in autistic children. Electroencephalographic studies tend to indicate a preponderance of positive findings in schizophrenic children and negative findings in the autistic. Rimland further points out that the schizophrenic child usually exhibits a clinging behavior, a strong tendency to "mold" to adults like plastic or dough. The autistic child, in contrast, is typically stiff and unresponsive to others. In infancy and later childhood, he remains aloof, in apparent unawareness of, or indifference to, the presence or absence of others. The compulsive need for sameness found in autistic children is not common in childhood schizophrenia. Hallucination, common in schizophrenia, is not reported in cases of autism. Motor performance of autistic children is reportedly much better than that of schizophrenics. The bizarre language patterns of autism, with striking uniformity among cases, have not been reported in schizophrenia; neither has the occurrence of unusual feats of memory and mechanical performance, often reminiscent of the *idiot savant*. Studies of several other aspects, such as incidence of autism and schizophrenia in twins, their parents' personality characteristics, and familial histories of mental disorder, all point toward sharp distinctions between autistic and schizophrenic syndromes. A study by Schopler,[40] and one by Singer and Wynne,[41] tend to support these distinguishing features that were listed also by Rimland. Early infantile autism must be distinguished from schizophrenia if research in these areas is to be meaningful.[42]

The literature regarding early infantile autism is characterized by confusion and disagreement. This is attributable to inconsistent diagnostic criteria, rarity of the illness, and a dearth of follow-up studies.[43] Variations in professional orientation and theoretical commitment of the writers have also contributed to the problem, as seen in the numerous and diverse etiological theories which have been offered. A sampling of these theories includes early fixation at, or regression to, the primary phase of extrauterine life,[44] lack of exposure to important experiences at crucial periods of development,[45] pathological qualities of mothering,[46] innate constitutional deficiency of the child,[47] hereditary trait, chromosomal abnormality, or possible pathology of the reticular formation,[48] or combinations of these factors.[49]

Despite the abundant disagreement with regard to classification and etiology of early infantile autism, most writers appear to agree that the primary treatment problem is to stimulate the child to interact with the people in his life.[50] Toward this goal, a variety of methods has been tried, again reflecting the theoretical commitments of those involved. Treatments have included residential and outpatient care, standard suppressive psychotherapy,[51] special physiotherapeutic stimulation,[52] family counseling,[53] therapeutically oriented day school,[54] a residential school with elaborate personnel arrangements geared to provision of mother surrogates,[55] intrusion and frustration,[56] and residential team treatment directed toward the development of body image and object relations through well-timed frustrations.[57] All of these have been strikingly unsuccessful.[58] Recently, the use of drugs has given some hope, but there is insufficient evidence at present and too little time has elapsed to allow fair evaluation of it.[59] The prognosis is "bleak," according to Mahler,[60] and most other writers agree. It has been noted that autistic children seem to fare better with an affectionate, minimally stimulating environment than with intensive professional care.[61]

A common observation throughout the literature is that autistic children show unusual interest, and often talent, in music. Schulman[62] cites the case of an autistic child who sang operatic arias at the age of 18 months, although he did not develop speech until nearly three years of age. Ritvo and Provence[63] report a child who, at about two and one-half years of age, developed a strong interest in phonograph records which he played continually; however, he would skip over the parts which used the human voice. Most of the reported cases of autism mention the child's profound interest in music; reports of musical ability in these children are most frequently stated in superlative terms.

One of Kanner's cases, unusual because in adulthood the patient is considered recovered, became a composer.[64] A subject in a case reported by Anastasi and Levee[65] was such a fine pianist that professional musicians would go to his house to perform with him, despite his unreasonable personality. Although this person was reported as an adult idiot savant, the information reported indicates that he was an autistic child grown to adulthood.[66] A study of over 30 autistic children revealed only one who did not show "deep" interest in music.[67] In another study, one of four autistic children displayed interest described as "extraordinary knowledge of recorded music," two were considered in the class of "musical genius," and the fourth had "an extensive repertoire of popular and classical music."[68] Oppenheim reports her own autistic child, who had been thought to be precocious and musically talented. "He learned to sing before he was a year old. By the time he was two, he knew a vast repertoire of melodies, ranging all the way from nursery songs to operatic arias."[69] He sang with the syllable "la," rather than words. She asserts that no one had made any effort to teach him to sing, but that he had done so naturally upon his own initiative. Sherwin,[70] Bergman and Escalona,[71] Kanner,[72] Schulman,[73] and numerous other writers have cited such phenomena as amazing musical memory, unusual singing ability, perfect pitch, and deep interest in listening to music. Rimland's study has led him to the conclusion that musical ability and interest are "almost universal in autistic children."[74]

Beyond the superficial remarks which simply note the child's interest in music as an interesting symptom, little study of the subject has been made. Sherwin[75] reports his study of the musical responses of three autistic children. Two of these children were identical twins seen for treatment at the age of three and one-half years. Child A, one of the twins, had shown a profound interest in music at one and a half years of age, correctly singing scales, folk songs, and selections from a symphony. Upon hearing a familiar song, the child would smile. When anxious, he would rock rhythmically while singing rapidly at a high pitch, often endlessly repeating motives or fragments sequentially in rising pitch. (Sherwin notes the regular use of this musical device to express rising tension.) Although A usually sang with exceptional accuracy, anxiety would cause a screaming tone, distortions, and variations such as rhythmic diminution and distorted melodic inversions. The child never used words in his songs. Although the singing of the therapist seemed to soothe this child, his own singing did not seem to modify his emotional state when he was already anxious.

Child B's interest and ability in music were less marked than those of his twin, A, but they were still more marked than usual in an ordinary child. His singing increased near the end of therapy, but became less accurate. Sherwin interpreted this as a subjective expression of particular emotions involved rather than a desire for communication. This child's anxiety seemed to be decreased greatly when the therapist played the piano. When B would stand by the door, indicating his desire to leave, piano music would calm him, and he would climb into the therapist's lap. After about six sessions, he would indicate his desire for the stopped music to be resumed by pushing the therapist's hands toward the keyboard, or by guiding the therapist to the instrument. In the seventh month, he indicated selectivity for pieces, sometimes based on familiarity, but usually on his preference for a strong rhythm. The meter and register seemed immaterial, except that B rejected the very low register of pitch. Sherwin concluded that the child's responsiveness to the therapist was based upon the association of the therapist with the production of music.

Child C, seen at the age of four and one-half years, had revealed great interest in music at 14 months; by 18 months, he was able to sing songs by Schubert and Brahms, selections from Carmen, various well-known songs, and themes of symphonies. He listened to pieces played on the piano by the therapist and was reluctant to stop, placing the therapist's hands back on the keyboard at the end of a piece. This child had an extraordinary memory for all types of music and would spend long periods listening or singing. His singing was always initiated at his own will; to induce him to sing required one to sing something first, then C would invariably repeat what he had heard. If the last note of a song were omitted, C would supply the correct note. As this child's condition improved, his musical interest and ability waned, his accuracy diminished, and he sang less.[76]

Despert states three possible explanations for the frequency of unusual responses of autistic children to music:

1. These children appear to have exceptional acuity to sound.

2. This interest may be a secondary factor based upon the autistic child's preference for objects rather than people, who create words; it is "part of the total 'obsessive preoccupations' of these children . . . with sound, light, or various objects, or play."

3. Rather than being the result of a barrier against verbal human communications, music may be a primary factor functioning to prevent the development of such human communication.[77]

These explanations strongly reflect Despert's theoretical orientation.

Other explanations have been offered, each of which reflects the theoretical orientation of the explainer. Rimland[78] suggests a neurological explanation based on numerous studies of sensory deprivation, neuronal discharge patterning, electrophysiology, and the relationship of heredity to intellect and aesthetic values; this author is one of those who favor a theory of physiologic dysfunction as a cause of autism, with a possible genetic element. Sherwin offers two possibilities:

1. Considering the fact that the overwhelming majority of autistic children are the offspring of very intelligent and sophisticated parents, "music and fine records may play a greater part in the environment of these children than in the average home." /In his three cases, the parents of C were both singers and the twins' mother sang to them frequently./

2. Music may appeal to these children because it is inherently less specific than speech.[79]

Sherwin believes the autistic child's choice of music as a central preoccupation or development of ability to the exclusion of most other environmental aspects is significant. He thinks that music may represent a therapeutic approach, at least for the purpose of making contact with these children. He also believes that it is possible that music may actually help to improve the autistic condition.

On the other hand, it has been suggested that autism is a fixation at, or a regression to, the primary level of extrauterine life.[80] Writers committed to this theory relate the autistic child's behavioral characteristics to an infantile level of development characteristic of the first four months of life (as interpreted in terms of the psychoanalytic school of thought). Sterba[81] has attempted to analyze the meaning of music in terms of human psychological processes and concluded that music precipitates a regression to early infantile kinesthetic pleasure as well as the dissolution of ego boundaries. This explanation attributes to the ordinary enjoyer of music the very same qualities that are attributed to the autistic child by those committed to the psychoanalytic school.[82] Kohut and Levarie[83] express the same reasoning that Sterba gave for the enjoyment of music. Sherwin[84] suggests that if the psychoanalytic explanations for the enjoyment of music by ordinary people and for the condition of early infantile autism which both stipulate a fixation at, or regression to, approximately the same period of early infancy are correct, the autistic child's profound musical preoccupation should belong to the period of fixation. Thus, music may not be beneficial at all in the treatment of autistic children, but might simply strengthen the fixation at the early infantile level. The possibility that the use of music in the treatment of autistic children may actually impede progress does not appear to have been expressed by other writers; to the contrary, Mahler[85] states that "the autistic child is most intolerant of direct human contact. Hence, he must be lured out of his autistic shell with all kinds of devices such as music, rhythmic activities and pleasurable stimulation of his sense organs."

That interest or ability in music is an outstanding characteristic of early infantile autism is reflected in the frequency and way in which it is reported. Such frequent mention of musical preoccupation is not found in the literature concerning other conditions, such as mental deficiency or childhood neurosis, nor in reported cases of childhood schizophrenia which are clearly not autistic. Not only the frequency of the reports of musical interest and ability, but also the manner of reporting is indicative; seldom has any writer noted the autistic child's interest without using such superlative terms as "amazing," "unusual," "vast repertoire," "deep interest," "profound interest," "astonishing ability," and "great skill." There are undoubtedly exceptions, but they are apparently very rare. The writers clearly have been impressed with the presence of musical interest in children with early infantile autism.

In therapy, education, and socialization for autistic children, this musical interest and ability appears to be a fruitful area for study. The field is entirely open; the numerous theories of etiology of autism offer little evidence in their own support, and what evidence is offered is used in conflicting ways to support various contentions. There has been almost no systematic study of the musicality reportedly common in autistic children, but on the basis of their own theoretical orientations, some writers have attributed it to psychopathological processes,[86] to living in a sophisticated musical environment,[87] to an innate, inherited predisposition to the enjoyment of music, or to a neuronal need for pleasurable stimulation without requirement of integration and understanding as a meaningful experience in terms of external reality.[88]

To date, the literature regarding infantile autism is characterized by confusion and disagreement. Reports of autistic cases are found under the heading of childhood psychosis,[89] schizophrenia,[90] and miscellaneous reports in which no diagnosis is given.[91] The syndrome is very rare. Kanner, who first described and named it,[92] has seen fewer than 150 cases of it in more than 30 years of practice in child psychiatry at Johns Hopkins Hospital; in this time, he has seen more than 20,000 disturbed children from all parts of the world. Despite this rarity, a large volume of literature on the subject has accrued, "far out of proportion to its small absolute numerical incidence."[93] Despite the large store of literature, the etiology is still unknown. No cure has been found. Although the chances for recovery appear to be very small, those few cases in which recovery seems to have taken place apparently recovered spontaneously. No adequate theory has been proposed to account for early infantile autism, although much speculation has taken place.[94]

Clinical Experiences with Hospitalized Early-Childhood Schizophrenic Children in Music Therapy

Barbara Romerhaus

The author worked as a music therapist with a group of young children for a period of two years at a clinical research center. The children, ranging from ages 2 to 8, were diagnosed as having early childhood schizophrenia, autistic type or autistic type with symbiotic features. The majority of these children were either mute or vocalized for purposes other than for communication. Those children who did use speech used it in a baffling manner. Naming objects was common, but asking or answering questions was rare. Other speech symptoms were delayed echolalia and pronominal reversal.

The children exhibited extreme withdrawal from interpersonal relationships or fluctuated between withdrawal and extreme clinging to adults. They resisted changes in routine and insisted upon preserving sameness in the environment. They frequently engaged in ritualistic behavior centered around the use of their own bodies and/or inanimate objects. Their toy play was inappropriate, often consisting of stereotyped usage of only a part of a toy. Along with this inappropriate use of toys and inanimate objects was repetitive and "fetishlike" preoccupation with mechanical objects such as light switches and doorknobs. These children either were not toilet trained or displayed inconsistent control. They generally were feeding problems, having odd habits and preferences.

As an example, a five-year-old autistic boy was reported to have some musical ability. He exhibited such autistic features as very little awareness of other people, no communicative speech, and a ritualistic pattern of spinning any toy or object, regardless of its intended use. At the piano, he could play chords in various inversions and scales in octaves. On one occasion, he spontaneously sang perfectly in tune, using the appropriate words, a familiar song; then he proceeded to pick out the melody on the piano using one finger. He accomplished this with accuracy. The responses from this child tend to support Sherwin's[95] findings that there exists a preoccupation and unusual absorption in music, a rote memory for melodies, and a preference for singing over speech. This same boy, when listening to any classical music, would gaze at the record player and would appear to be in a "trancelike" state, completely absorbed, for as long as the record would continue playing. When the record was changed to fast polkas, or a pop tune his attention would immediately wander to other things.

The children had two group music therapy sessions daily. During the first half of each session, the children were seated around the piano; during the last half, they participated in a vigorous activity involving more body motility. When the activity was first initiated, the children resisted staying within the circle around the pianc. There was much "escaping" from the circle, and loud crying when the "escaped" child was brought back into the group. Gradually, the crying and desire to run from the group decreased, and most of the children came into the circle willingly. Some of them began to participate actively and appropriately. Frequently, the children would draw up their own chairs around the piano in preparation for the activity, and two or three would bring chairs for the others.

The activities used during the first half of the session included action songs involving specific body motions such as clapping, stamping, or finger play. Also used were songs referring to different parts of the body; songs intended to help with body identification, or self-image. Rhythm instruments, such as tone blocks, sand blocks, and drums, were introduced. Most of the children learned to play them appropriately for at least short periods of time.

In the more active part of the session, the children were encouraged to use their bodies freely in jumping, running, hopping, etc., to appropriate rhythms. Some of the children learned to bounce balls and ride bikes to music. Circle games, in which the children were required to hold hands with each other and with adults, were encouraged. These games fostered interpersonal interaction. Musical games were successful in evoking appropriate participation from some of the children.

During the course of these music sessions, it was not unusual to see stereotyped movements to music, such as rocking back and forth, shaking of the head in rapid motions, and twirling or spinning of the body in continuous circles. This behavior seemed to be ritualistic and tended to interfere with more desired responses. Often when the music therapist was on the ward at times other than the scheduled music sessions, a child would lead her to the piano and place her hands on the keys, thus indicating a desire for her to play.

Case 1. The therapist first saw this eight-year-old girl on the ward where she was pacing the floor holding her hands to her ears in an attempt to block out sound, while singing a familiar advertisement jingle. This child had a large repertoire of commercial tunes which she apparently had learned from radio and television, but little or no communicative speech. She rapidly learned new songs from the group music sessions and burst forth singing them at various times of the day, even singing some of the piano embellishments. At the beginning of the group music sessions, the patient often became extremely excited, jumped vigorously up and down on her chair, smiled, and laughed. At times, she would bounce up and down in time to the rhythm of a song.

The patient was subject to severe temper tantrums, accompanied by much self-abusive behavior. Music often intervened to calm her anger, changing her mood to a happier one. On a few occasions, the patient would sing a song that apparently was an attempt to communicate. One day when she was especially anxious to have her music therapy session begin, she approached her music therapist who was sitting down, and as she tugged on her arm for her to get up, she began to sing "Lazy Mary, Will You Get Up?"

Case 2. Two years ago, the music therapist began working with this patient, who was then seven years old. The patient had begun to use speech at the age of five years. His speech consisted of several appropriate phrases, frequent echolalia, and several rigid speech patterns used for no apparent communicative purpose. Much of his behavior was ritualistic and compulsive, and there seemed to be great need for him to feel he was in control of his environment, for it was difficult for anyone to break into his familiar patterns and initiate a change in his routine.

The patient was skilled in music, being able to learn songs very rapidly and to carry a tune. He was very fond of listening to records. He listened attentively, usually sitting very still, but sometimes rocking his body in rhythm to the music. About a year ago, he began to show curiosity about the piano, playing a few notes himself, watching and imitating the music therapist's hand positions and movements when she played, and affectionately saying, "This is the piano." He was very attentive when the therapist showed him the letter names of the notes, and soon learned all the names of the notes himself. His interest remained high as he progressed to the beginner's piano book, and he soon grasped new concepts, as, for example, the differentiation between right and left hands. He was soon able to understand the written symbol on the page and transfer it to the actual key on the piano. He also learned how to read and to play with correct fingering. This patient has progressed rapidly in his learning, has maintained consistent interest, and has recently started in a second instruction book. He is now living at home and attending a special education first grade class. He returns to the hospital weekly for his piano lesson.

Music Therapy in a Children's Day Treatment Center

Natalie R. Werbner

In music therapy with emotionally disturbed children, it has been found necessary to use a variety of adaptable materials.

Case 1. T was seven years old when he entered the children's day care center. His diagnosis was infantile autism. For many months, he played with blocks, constructing intricate buildings. Since his early verbal exchange centered around numbers, it was through these that he was enticed to broaden his interest to include music and to develop better interpersonal relationships with peers and staff.

By using "The Inch-Worm" song from the movie Hans Christian Anderson,[96] the therapist was able to keep him in the group for short periods during the daily music therapy sessions. T elaborated on the song by wanting to add higher and higher (numbers), until the therapist was forced to add to her music notebook a paper with the order of the sums because she could not add them fast enough and yet stay alert to the needs of the others in the room.

After T overcame his fear of touching the piano, the piano keys were numbered with a felt marking pen, starting with the lowest bass note. He would then sit on the therapist's lap and count the keys. Short conversations, involving "how many white and black keys there were," ensued. Later, the numbers were erased and a new system was introduced: that of numbering one through eight, using middle C as one. This was done to correspond with the scale numbers found in the book, Timothy's Tunes.[97]

The therapist, with T sitting on her lap, played the tunes while singing the numbers and then the words. During this time, the other children used rhythm band instruments, hummed, or sang. T was soon able and eager to pick out tunes on the piano by using the numbers. T internalized this idea to the extent that he could often sing familiar tunes with numbers he had figured out for himself (these were usually correct).

"Music time" at the children's center is primarily a group activity, with an effort to fill the needs of each child. Music is a voluntary activity, and the children are free to come and go. The sessions are held in the music room where no toys are in sight, since the absence of distracting stimuli, such as exits, stairs, toys, etc., in the music room helps the children to focus their attention on the activity and the persons at hand. Active participation of both regular and volunteer staff has helped the children participate. These adults have served as models for the children. This has been of great importance because the parents of most of the children were not able to serve as good models in most activities.[98]

> Case 2. M, an infantile autistic boy, was 12 years old when he entered the center, and although he had had no formal schooling, he had learned to read some words and to figure out complex mathematical concepts. Long before he spoke, he sang in a loud, gusty "La la la." As he developed better interpersonal relationships, more and more was required of him. (This reflects one of the major principles of the children's center.) M was required to ask with words for the song he wanted, instead of just singing or stating the first line of his request. Initially, he was granted each request immediately. Later, he had to wait his turn like the others. He learned to find the proper page in the correct book out of the many the therapist placed on the piano each day. He also learned to use a table of contents--a feat which thrilled him. None of these steps were taken with great ease. In fact, many were painful for him, the therapist, and others around him, for he fought bitterly against becoming an independent and responsible person instead of an omnipotent, demanding "baby."

Another practice has been to use songs of identification. This practice stemmed partly from the folk song, "Bingo." Many of the children and staff had dogs and cats at home. Each person, and the appropriate name of his pet, was the topic of a song. The therapist printed in capital letters the names of persons and pets, and this stimulated several children's reading interests. The letters of the names of each child were sung to the tune of "Frère Jacques." Colors have been stressed by songs about various articles of clothing worn by each child, as in "Mary Wore a Red Dress,"[99] and by songs about the spellings of different colors. For the latter songs, the therapist printed the name of each color and enclosed it with a rectangle using appropriately colored ink.

Because the 18 children enrolled in the center ranged from three and a half through 15 years of age, the situation somewhat resembled that of a family group with many interests and needs. The therapist emphasized this variety of needs by pointing out each person's favorite song as it was played and sung, thus strengthening the individual's sense of identity. This demonstrated that each individual mattered. Not all the children cared for every song, but most children learned to respect the right of the others to have their turns. Evidence that the concept of individual worth had been absorbed by some of the children was provided when one of the children remarked, "Oh, why don't you play 'Eh Cumpari'?[100] That's Bobby's favorite song."

Two pieces of equipment which have proven useful in therapy for withdrawn children are the accordion and the tape recorder. The accordion allows the therapist to have face-to-face contact with the children. It also draws the child to it because of its moving parts. And in turn, the child is drawn toward the person of the therapist. Thus, the child may proceed from an object relationship to an interpersonal one. The tape recorder has helped give an auditory sense of self to many of the children.

Clinical Experiences with Emotionally Disturbed Children

Dorothy Brin Crocker

The emotionally disturbed child, regardless of intellectual capacity, needs help in externalizing his tensions. Houck has said:

> The disturbed child has a variety of needs to be met. These are needs so individual and so urgent that ordinary means have failed. Drawing upon his own resources has not been sufficient. These needs vary from child to child, as well as from time to time within an individual child.[101]

Musical experience for the disturbed child offers many opportunities for the channeling of undesirable impulses into socially acceptable activities. There are values in music for the emotionally blunted child, for the hostile, aggressive child, for the withdrawn child, and for the child crippled by anxiety. "The music therapist, in conjunction with other therapeutic team members, can function effectively in these areas of deficit."[102]

In discussing the correlation between psychotherapy and music therapy sessions, Nicholaou stated:

> Because the personalities of the music therapist and the psychotherapist differ, the relationship will differ. It cannot be said, however, that the music therapist will empathize to a degree less significant than that possible for the psychiatrist, but it can and should be said that the psychiatrist will provide interpretation significantly deeper than that possible for the music therapist to provide. The observations of the music therapists, and other members of the team can be utilized by the psychiatrist in evaluating the child's needs in his environment.[103]

After the psychiatrist makes the diagnosis and outlines the goals of treatment, the music therapist utilizes these goals in structuring the music therapy program, and he also follows instructions as to how much and what kind of interpretation is to be done outside the psychotherapy sessions with the psychiatrist. The music therapist may try to provide situations in which participation in musical activities can arouse feelings of frustration in the child. These, in turn, may be resolved by new learning which might enable the child to modify his interpretations of his world and the people in it. Since psychotherapy often is focused on the relationship between therapist and patient, fostering such a relationship frequently is the primary aim in music therapy, but the efficacy of the treatment is increased by the various and subtle ways music can evoke feelings.

This account deals with music therapy for children with various disturbances. Some of the sessions were held in a school for children with emotional and/or academic problems, and some were held in a private studio; some were group, and some were individual. They were scheduled regularly for a half-hour or an hour either once or twice a week. Extra periods were arranged, if possible, when a child was unusually upset. A record player, rhythm band instruments, drums, some band and pre-band instruments, autoharp, guitar, piano, electric organ, song books, and tape recorder were used at various times.

The music therapist frequently improvised on the piano and requested that the child tell a story to the music.[104] This was followed by a discussion of the music, both to develop skills in listening to music and to encourage verbalization of feelings and attitudes. When some of the pieces entitled "Fear," "Anger," "Happiness," "Sadness," etc. were played, the child often discussed his feelings about that subject. (This was never done without having first secured the approval of the child's psychiatrist when treatment was started.) Children were encouraged to use their imagination while performing or listening to music, thus providing opportunities for increasing their capacity for fantasies. Materials, carefully selected, included music thought to produce fantasy. Such practice was used in individual and group settings. Occasionally, suggestions were made on how to listen imaginatively. There were also times when they listened to music of their own choice for whatever catharsis or aesthetic pleasure it afforded, without comment from the music therapist, except in response to comment by the children.

Even though communication through music is nonthreatening, the associations it may arouse can be threatening. Asking a child to perform or to lead a discussion of the music may be a means of increasing self-esteem or giving status within a group. However, it also may be interpreted by the child as pressure from a figure of authority, or it may arouse other feelings such as fear of failure, because the response might be inadequate or inaccurate.

An alert music therapist will be cognizant of reactions to pressure, will understand the child's assumptions concerning authority figures, note the child's reactions to fear of failure, and observe how he handles these feelings. The music therapist will soon know what the child likes and dislikes in the music sessions, his strengths, and his weaknesses. He will ask the child questions about the music and its influence on him.

Sharing music with another can frequently have a calming effect when something threatens the control which the anxious child needs in order to prevent himself from being immobilized or "blown apart" by his anxiety. "Anxiety can interfere with intellectual functioning, judgment and emotional stability, and distort the individual's entire personality pattern."[105]

Spontaneous dancing and creative movements to music can be supportive to the anxious child. He should be encouraged to express himself with a vocabulary of movements. The child who has difficulties in self-expression, the isolated child, or the child who is rigidly inhibited should be treated with extreme gentleness--casually invited and included, but never forced into participation. His efforts should be accepted on his expressive level without criticism. The belligerent, defiant child may test acceptance to the limits, or attempt to manipulate the music therapist into rejecting him and showing disapproval of his participation, thereby reinforcing his distorted interpretation, his faulty functioning, and his "assumptive world."[106] Failure to criticize and requesting the child to repeat some motions considered acceptable by the music therapist may influence his expressive level.

The following case histories illustrate some of the techniques used:

Case 1. N was a 12-year-old boy with a diagnosis of schizophrenia. His symptoms included fear of breaking something, poor emotional control, low frustration tolerance, fear of severely harming his parents, feelings of inferiority, jealousy, hostility, suspicion, and a high incidence of griping and complaining, not manifested by physical aggression. He sucked his shirt, wiggled constantly, and wrung his hands repeatedly. His psychiatrist asked the music therapist to refuse to let the patient manipulate her into the kind of behavior that would verify his beliefs that his feelings of suspicion, distrust, and self-unworthiness were justified. She was to refuse to reassure him repeatedly that he had not broken something, to redirect his need to provoke others until they retaliated (which was his way of forming relationships, even though they were unsatisfactory), and to help him to achieve some inner control.

His music sessions were centered around learning to play the piano and music appreciation, i.e., listening to music and discussing it and the composers. He also told stories to music. He showed considerable interest in the lives of the composers and asked many questions, such as did they trust people, were they suspicious, did they get angry, etc. The following story, told in response to an original composition, is an example of N's projection at a certain point of his therapy. Most of his "stories" were statements about his own stupidity, his anger, or his breaking something.

> The music sounds like the composer was afraid of what he might do. It got awfully angry and mad but then it got quiet and he thought maybe it would be all right if he liked someone a lot. Maybe he would have a real friend he could trust and it would be someone who would think he was a fine guy and not be afraid he would break anything. And if he had a friend he wouldn't get so upset and it would mean everybody didn't dislike him if he had a friend who wouldn't tattle on him. But when the

music got loud like it was at first he knew that he was stupid and he might do something bad to someone who got after him for griping.

After nine months of treatment, N showed an increase in frustration tolerance. In music, he was able to play the piano slowly and carefully, without having an outburst of temper, wringing of hands, or sucking his shirt when he made an error. He could tolerate correction without feeling threatened and rejected. Restless movements subsided a little, and anxiety lessened. There was a change in the content of his stories or statements to music, and his attitude changed from one of wanting to tell stories to one of indifference. This was interpreted as an indication that his need for the special attention which the individual sessions provided was lessened as better integrative functioning was accomplished.

Case 2. S was an aggressive, disorganized nine-year-old piano student who came to her lessons regularly, even though she often failed to bring her music. Her practicing was sporadic; however, she learned several pieces. She was frequently negativistic, responding poorly to suggestions for better performance and resenting the composer's markings for dynamics and interpretation. The music therapist refused to be manipulated into an argument, did not censure S's attitudes and negativism, and let the authority rest with musicians or music by saying, "In music the term 'ritard' means to play slower," or "Musicians watch the crescendos and decrescendos and other markings on the page so their music will sound beautiful." S felt less need to resist the authority of the teacher and gradually a good relationship was formed. She showed many signs of pleasure and pride when music was improvised, using as themes a few notes she had played. When music without dynamic markings was composed for her, she was encouraged to plan her fingering and interpret as she liked. This enabled her to set limits for herself and to test the gains she had made in making decisions, not being stymied by possible error, and acceptable self-assertiveness. Her statement, "You don't think I'm mean or stupid or you wouldn't write music for me," marked the beginning of changed attitudes during her music sessions. Thus, the goals that had been outlined by the psychiatrist had been met.

Case 3. M was diagnosed at age nine as having a schizoid personality. Earlier, it had been noted that her behavior was frequently bizarre and hallucinatory. When she was angered, she attacked, both verbally and physically, the person provoking the anger. This happened with siblings and neighborhood children, but at the public school, she was quiet and withdrawn in class, and played alone on the playground. She had no friends and viewed all adults as "mean and hateful," saying, "My mother and daddy hate me--so does my teacher."

Because of her apparent musical ability, M was referred to the music therapist. It was hoped that kind, firm, consistent behavior on the part of a friendly adult would enable her to form a satisfactory relationship, thereby altering her assumption that all adults hated her. In addition, her doctor felt that learning to play the piano would provide an intellectual challenge, afford group recognition, and provide an emotional outlet.

M studied piano, taking lessons twice a week for five years. She attended her lessons regularly with the exception of a vacation of two months every summer. The first six months were devoted primarily to developing a good relationship and learning the fundamentals of music. She attempted constantly to manipulate the therapist into criticizing and rejecting her by saying, "I don't care if my arms are too low, and I like seeing my joints break." The therapist would casually comment, "It is easier to play if your shoulders and arms are free and in a comfortable position. You can hold them that way, and when you want to, you will."

M began to play with other children, and she was reportedly a little less shy at school by the end of the first year. She was warm and friendly to the music therapist and took pride in playing the simple pieces she had memorized. The second year resulted in a continuation of the supportive relationship and progress in music as a secondary aim. Outbursts of anger began to show up during the third year, which

> probably resulted, according to her doctor, from her mother's illness and irritable, inconsistent discipline. There was more tension in the home due to a rebellious teenage sister. This was more pronounced the fourth year, and the need for "team communication" was especially evident on one occasion. When M said, "I did it--I got the butcher knife and went in her ropm and was going to kill my mean old mother but I didn't," the music therapist replied confidently, "No, and you never will--if you start to do anything like that you will always stop yourself." Without further conversation, her music lesson was resumed, and M played wildly, loudly, and inaccurately, with exaggerated dynamics. When she finished, she shrugged her shoulders and left without saying goodbye, only to return in a moment, hug the therapist and say softly, "I love you--you are good to me." Then she left abruptly. The therapist reported immediately to the child's psychiatrist. The destructive feelings of the child toward her mother were handled subsequently in psychotherapy. M ultimately learned to play well. She received praise for her performances in recitals and school programs during the time she studied piano. According to her parents, when she was upset she frequently played until the music relaxed her.

In conclusion, musical experiences for the disturbed child can supplement his psychotherapy program by affording him a unique outlet for some of his unacceptable impulses. Immediate and long-range therapeutic goals established by the therapist guide the music sessions. He establishes a therapeutic relationship and emotional climate which determine the effectiveness of the music therapy for any maladjusted child. The disturbed child needs aesthetic expression,[107,108] and music offers aesthetic experiences in a special way.

Individual Therapy with Adolescent Patients

Dorothy Twente Sommer

Adolescents with behavioral disorders present special treatment difficulties in large public institutions, yet these patients can become a unique challenge to the music therapist. Group activities appropriate for adult patients may be quite unsuitable for teenagers. One young patient among a group of older patients is apt to have a disastrous effect on the group. It is also potentially harmful for an adolescent patient to socialize with alcoholics and psychopaths twice his age at a dance or in the canteen. Just as a short term in prison can launch a young offender into a career of crime, so can a mental hospital introduce a patient into the vicissitudes of institutional living.

Hopefully, a young patient's stay in a hospital will be brief and limited to an admission ward. Unless there are enough teenage patients to form a special group, it is generally better to treat this patient individually. Friedenberg,[109] author of *The Vanishing Adolescent*, says that when two people who are otherwise different from one another share skills, goals, and a common area of experience, each helps the other to understand his own uniqueness. When a patient is interested or skilled in music, the music therapist is the logical person to play a major role in therapy. This does not imply that the music therapist must perform psychotherapy which might require extensive training in specific techniques. What is needed is a warm accepting relationship between patient and therapist, facilitated by common interests.

Effective individual therapy places certain responsibilities on both parties. The music therapist should have sufficient time for extra visits with the patient. He should allow for coffee breaks, short walks, or special trips outside hospital grounds. The therapist must also report the patient's progress to the other team members. This, of course, is essential to individual therapy with any patient, but it is vital in dealing with adolescents, because even in a normal state the adolescent personality often arouses guilt, anxiety, and hostility in adults. Friedenberg believes that this conflict in the adult arises from "fear of disorder and loss of control, fear of aging and envy of life not yet squandered."[110] The therapist should honestly evaluate his feelings toward the patient and, when necessary, consult with a psychiatric advisor.

The situation in individual therapy must be so handled that the patient considers the music therapist a friend and teacher. If he can take the therapist into his confidence regarding his hopes, fears, goals, and plans, so much the better. The therapist should be informed, whenever possible, of any administrative decision which will affect the patient's well-being. When discharge is imminent, the therapist should be consulted as to the patient's needs outside the hospital. If necessary, arrangements should be made to continue music therapy on an outpatient basis. The following example of individual therapy with N, an adolescent patient, should illustrate many of these points.

Case 1. N, a 15-year-old with exhibitionistic tendencies, was referred to the music therapist after she had been in the hospital for six months. By this time, she had gained the reputation of being a "troublemaker." It was apparent that she was using her hospital confinement to secure maximal attention. Her history listed a broken home, a series of foster homes, very sketchy formal education, and numerous juvenile misdemeanors. She was sent by the court to the mental hospital. At this time, she was the only teenager on the admission ward. Her positive qualities included intelligence, warmth, and cheerfulness, and she easily won the friendship and trust of almost everyone. She occasionally "ran off" with psychopathic male patients. At one point in her hospitalization, she had expressed an interest in playing the piano. The treatment team believed that playing the piano could serve as an outlet for N's exhibitionistic tendencies. It was agreed that she should spend a large portion of her activity time with the music therapist for piano lessons and informal sessions.

N needed a period of exploratory "musical scribbling"[111] and some immediate gratification. Initially, she was allowed to indulge her child-like curiosity in every instrument in the music room. During a typical session, she would flit from the set of drums to the autoharp, to the guitar, and finally to the piano, experimenting briefly with each instrument. Sessions often included playing records, dancing, or listening to music.

In piano, the goal for the therapist was to give the patient some gratification and to increase her attention span. At first, the *Play-by-Color*[112] series was used. N learned this rapidly and was delighted that she could play recognizable tunes so easily. Because *Play-by-Color* books were available on her ward, she was able to practice there also. As her interest increased, Jorgensen's *Music to Play and Sing*[113] and McGinley's *Chords and Melodies*[114] were introduced. These provided the necessary rudiments she needed to pick out folk and pop tunes, and to add chords and rhythm.

The therapist spent much informal time with N. She was encouraged to help in the music department record library and to do other odd jobs. The therapist accompanied her on shopping trips, drives, and various excursions outside the hospital. When the patient was ready to be discharged, the music therapist conferred with the patient's psychiatrist and social worker. It was agreed that it would be desirable if N could continue her music lessons outside. The social worker located a foster home and arranged to have the state provide funds for additional piano lessons with a music teacher in the community. N left the hospital a better integrated, more responsible individual. Her relationship with the music therapist probably had an important role in the patient's self-discovery. The individual approach is extremely valuable in working with adolescents who have problems in establishing a stable self-identity in an adult world and should be considered whenever possible.

Group Music Therapy to Develop Socially Acceptable Behavior Among Adolescent Boys and Girls

Barbara J. Cavallin
H. W. Cavallin

In recent years, there has been a considerable increase in state hospitals in the rate of admissions of patients between 16 and 21. Because of the specific problems this age group has in developing appropriate social behaviors between the sexes, it was decided to include a program to help them develop these behaviors in the treatment setting. Music is a particularly effective tool for social interaction. It offers a flexible range of activities (from a passive program of listening to active participation in dancing and "jam sessions") in which the degree of closeness or distance between the sexes can be easily controlled by the therapist and the patients.

The selection of the patients for this program was made according to level of functioning rather than diagnostic categories. All of the patients selected were in an open ward and capable of participating in most activities with a minimum of supervision. This was the only selection criterion used, for problems of developing appropriate social behavior seem to be common to most adolescents, regardless of their diagnostic categories. The group was limited to between 15 and 20 patients.

The program was originally structured by the therapist. There was a definite time to meet, twice a week, and all members of the group were expected to attend punctually. It was agreed that refreshments could be brought to the meetings, but they were to be obtained before the scheduled meeting time. The actual structure within the allotted time was extremely flexible. The patients were to have much of the responsibility for this structure. They were to select the music, handle the records and the record player, and also be responsible for cleaning the room after the meetings. Eventually, the patients were encouraged to select new records and organize singing and dancing groups. The therapist consistently encouraged freedom and creativity, but always stressed that freedom must be accompanied by a sense of responsibility.

The first meetings were characterized by tenseness and withdrawal. The boys sat on one side of the room and the girls on the other. Little verbal communication occurred. Most of the communication took place with the therapist as a mediating agent. A general attitude of dissatisfaction was revealed by complaints, mostly about the music. The group classified the music as "square" and "antiquated." Having the patients choose some new records from a catalogue resulted in a decrease of complaints and a growing interest in the program. During this period, an increase in the patients' anxiety also appeared. They complained about having to attend the activity when they could be in the canteen, and said they did not see "any sense" in "all this" since they weren't particularly interested in music. However, none of them would miss or be late for a session, and they were unusually careful about their dress.

In a session approximately two months after the program started, two of the most active members of the group began dancing and "necking" in a rather provocative way. The rest of the group became very anxious. A girl left the room, vowing she would never come back, and one of the boys turned his chair around and faced the wall. Rather than reacting in a prohibitive way, the therapist attempted to cope with this behavior by discussing the reaction of the group. In the next session, a regression to the former stage of complete segregation of sexes occurred. Soon, however, communications seemed to improve, and the group members developed better interaction. Overt but acceptable behavior, such as holding hands and dancing closely, began to appear. The whole incident seemed to have created a more comfortable atmosphere for the group.

The patients soon began to organize their time. They divided their two music hours into an active session and a passive session. It was decided that one session would be spent in listening and dancing, and the other one would consist of special interest activities. One group of patients wanted to organize a "jam session," another group wanted to learn to play instruments, and a third group chose to listen to records. The groups used three adjoining rooms for these activities. The therapist concentrated on the active groups, but also aided the listening group. The listening session was also given more structure by the adolescents. They organized three groups and decided that a different group would be responsible for selecting the records and playing them each day.

A few difficulties were encountered by the group. Among these problems were "crushes" on the therapist, fights over a girl's or a boy's attention, and occasional "temper tantrums" by some of the most disturbed members of the group. However, the group managed to handle these problems without much assistance. Their major sources of strength seemed to be a sense of cohesiveness and the presence of an interested adult to help them when their impulses seemed overwhelming.

The adolescents were reassured by the presence of an adult during the process of learning socially acceptable behavior. They also communicated their need for independence by planning new creative activities. When they organized a variety show which was staged for the patients in the hospital, they were adamant about being the organizers of this show but wanted the therapist to be their "technical adviser."

The quantity of complaints about the program decreased. The hospital staff began to report changes in the general behavior of the adolescents. The most significant of these changes were the appearance of positive feelings in the adolescents toward the adult staff, and a decrease in elopements. It is difficult to say exactly how much these changes were being influenced by the music program, but there was little doubt in the minds of those who worked closely with the group that this particular activity played a significant role in the overall treatment program. The music therapy group technique was found to be highly successful and was believed to help approximate a normal maturation process for hospitalized adolescent patients.

Case Studies

Cases Reported by Natalie R. Werbner

Case 1. B was an extremely obese 13-year-old boy. He had expressed interest in music, and it was expected that music would offer him an opportunity to achieve treatment goals in a nonthreatening and noncompetitive situation. His constant demands on his peers and on adults, his volatile temper and lumbering nature made him a most unpopular person. However, he had a quick and subtle wit. His need to be wanted and praised was satisfied in a limited way in his weekly music sessions.

Originally, he had asked to learn to play the piano and to read music. His approach to music was quite different from that toward his school work, the quality of which was considerably below his ability. He even attempted to do some music theory papers. He showed an ability to comprehend abstract ideas. His interest in composition was stimulated when he browsed through a notebook of original compositions by former pupils and patients of the therapist. B wanted to compose a "long, long, long, song." The repetitive adjective was typical of his requests and descriptions and seemed to be a reflection of his physical bigness and its concomitant psychological image. The creative desire was realized by having B improvise on the keyboard while the therapist notated the music. In spite of his lack of pianistic background, B discovered, and consciously used, many accepted techniques. In his music, as in his verbal output, there were many repetitive passages.

At times, when the therapist played back to him what he had composed, he excitedly accused her of changing his ideas. To help him understand that the source of difficulty was *his* change of mind rather than the therapist's misinterpretation of his playing, the therapist suggested that it might be helpful if she brought a tape recorder to each session so that they could check accurately what had occurred. She also pointed out that the changing of a "first" musical idea to one which better expressed what the composer wanted to say musically was a procedure often used in musical composition. Through use of the tape recorder, B was able to take more responsibility and to separate his thought and action from that of the therapist.

After spending many weeks on creating a continuous "long, long, long" piano composition, he decided to tell a story while he played. Quotes from his stories may give some indication of his fantasies and his confusions.

> Once upon a time there were three little kittens and the mother said, "Where are you going kittens?" and the three mice said, "I do not have no mittens but I still want some of the pie," and the mother said, "If you're nice I am not your mother, because I am not your mother. I am a kitten." Do you know the story of this little ______ named Dracula that gives nice little boys all his pie? Now I have you, I'm going to take you home with me and take you with me in my house to make you a little, teeny, weeny, weeny, weeny, teeny, weeny, little, idiotic, baby boy . . . and oh! there's one name that I can promise and that's Lon Chaney-Lon Chaney, because he hates Dracula and Lon Chaney is Dracula so I can't call you Lon Chaney because I am Dracula, because Lon Chaney is my name and you can't have my name, so if you don't want my name, I gonna still call you Count Dracula, Lon Chaney and the big giant.

As this material poured forth, the therapist treated it as a "creative effort" on B's part. But being aware of the many other ramifications of the material, she consulted the chief of social service about it. It was decided that such experience was beneficial to B and that the music therapist should continue to treat it as she had been, making no attempt at any interpretation on a psychological level.

B derived great pleasure from seeing his own three-ring notebook fill up with his original works, and also learned about various extended compositions, such as symphonies, sonatas, and oratorios. Added to these benefits was the incidental, but treasured, status he gained among his peers as a result of having a regular, individual music time--something highly prized by many youngsters in the hospital.

Case 2. S, a 15-year-old girl, entered the children's convalescent hospital in a depressed, withdrawn state, with an acute school phobia, plus minor aggravation of her rheumatoid arthritis. She professed to have lost interest in everything, and there was concern about finding something which might interest her. During preparation for a Christmas program, a doctor heard her singing in the chorus and recognized the fine quality of her voice. She told him that she enjoyed this activity. He immediately passed this information on to the social worker who was seeing her on an intensive individual basis. The social worker, in turn, requested that S be offered an opportunity to have individual sessions with the music therapist. It was believed that in these sessions she would begin to find at least a beginning of enjoyment in her life and that this might alleviate the deep despair she was experiencing.

Because S found it almost intolerable to make any decisions, it was planned that the music therapist would help her as much as possible and demand as little of her as possible. S was told that the doctor had heard her sing and had spoken to her social worker who had then spoken to the music therapist, and as a result of these events, the music therapist was offering her a chance to share the pleasure of singing together for half an hour each week. S accepted this offer and attended weekly singing sessions. During these sessions, the therapist accompanied the songs on an autoharp which, because of scheduling problems, was the only instrument available at that time. Later, at S's request, arrangements were made to use a piano in one of the school rooms before school hours.

The therapist always acted as if she expected S to respond, and she did. Although the message "sent" to S was that the therapist expected she would respond, it included acceptance of her possible desire not to, and assurance that this desire would not be met with hostility on the part of the therapist.

Physical therapy treatments had been scheduled before the music sessions. Sometimes, she was late in returning from physical therapy and attempted to skip her breakfast so that she could get to the music lessons on time. Sometimes, the music therapist kept her company for the extra few minutes it took her to eat. Through such actions, the therapist tried to show that she cared about S and would try to help her in a variety of ways.

During nine months of music therapy, S never once refused to attend. However, the therapist often found her appearing as if she wished to shut herself away from her surroundings. She would be sitting or lying on her bed, appearing totally dejected, when the therapist came into the ward. However, when the therapist approached, S would get up and go with her, in spite of what appeared to be extreme physical pain in walking.

On one occasion, S had spent the day in bed as a result of an acute attack of her arthritis. The therapist consulted the charge nurse about getting S up for her music session. The nurse said that it would be a good thing to do if S felt she was able. This incident took place about a month prior to S's discharge from the hospital, and it was possible to ask S to make her own decision as to whether she felt well enough to get up. This was in contrast with early months of treatment during which the therapist would have had to direct her toward the room where the sessions were held. S decided to attend the session.

The therapist suggested that S make a song book. S chose one or two songs she had particularly enjoyed singing during each session and the therapist made copies for her to put in the book. S's collection grew weekly, and it was hoped that she would continue to add to it after discharge. After a conference with S's school teacher about the necessity of stimulating her interest in reading, the therapist began to share some of her books about music with S. These books were used in conjunction with the music in the therapy session, as were a variety of phonograph recordings.

An example of S's growth was her willingness to wear the therapist's sweater during a session when S felt cold. This probably could not have happened earlier in therapy, when S would hardly believe that she really mattered, or that she could trust someone without being betrayed. After seven months of sharing the therapist's songs, S made a "return gift" by showing the therapist a song which she had learned in her classroom.

S's last session showed still another facet of her growth. B, a teenager, was invited to come to the hospital for the specific purpose of singing and playing guitar with S. When S seemed tentative about singing "in front" of someone new, B spontaneously stated that she too had this feeling many times, and that she was trying to overcome it. After this exchange, music was performed in a variety of ways ranging from solos by each girl to trios which included the therapist singing and playing the piano. In this session, S seemed able to accept, integrate, and enjoy the act of sharing her singing session with another person.

Cases Reported by Geneva S. Folsom

Case 1. This case history covers a year's work with a 19-year-old boy in a private intensive treatment center where music therapy was part of a prescribed program for each patient. J had been admitted because he had uncontrolled outbursts of hostile, destructive behavior accompanied by boastfulness and contempt for other people's opinions and rights. Coupled with this was an intense need to be accepted by the group and a longing for affection and warmth he had never known.

For several months after admission, two attendants, chosen for their size and ability to handle this big, powerfully built young man, accompanied J to all activities. His full schedule included using the punching bag, driving tennis balls into the net, throwing the medicine ball, and so on. Because he played a band instrument, his doctor felt his interest in music could be used as a part of his therapeutic program which was designed to develop control of his hostility and increase the gratification he could get from interpersonal relationships.

The psychiatrist prescribed daily piano lessons and practice with a music therapist who was a warm, motherly person. Using a combination of gentleness and firmness, the therapist was able to engage his attention for increasing periods of time. At first, he was given exercises and selections that permitted him to pound and bang on the piano, and gradually these were modified as his needs for such outlets diminished. Then he was encouraged to play duets with the therapist so that he could gain pleasure from a cooperative effort.

When his behavior was sufficiently under control, J was assigned to the patients' band. He had expressed interest in this activity sometime earlier, but his behavior had been too aggressive. When he was finally allowed to join, there were only five others in the band, so the group was suitably small. One attendant still accompanied him, but his initial behavior was so disruptive that he was told he could not remain unless he could control himself better. By working closely with him and giving him the chance to exercise leadership where his skill permitted, the music therapist helped him overcome these initial difficulties. As his behavior improved, the other band members became more friendly and expressed admiration of his musical ability. Meanwhile, he discussed and "worked out" his problems with his psychiatrist. But it was through the activity with the music group that he began to comprehend the relationship between the control of hostility and the gratification to be experienced from personal contacts. The recognition he received for genuine achievement demonstrated this relationship better than mere words.

J was a proper case for referral to music therapy. Through the development of his illness, and even when he had an acute break, he maintained his interest in music, probably because he did receive gratification from it and also because it was one of the few things he did that gave others a chance to praise him. He was able to utilize the piano as an outlet for his aggressiveness and this provided another interest in addition to purely physical outlets. The opportunity to participate in the band was offered as a reward for acceptable behavior. Since he had much motivation to be accepted into the band, he made attempts to modify his behavior. The therapist worked with him individually when he was removed from the band and helped him perfect his part so that when he was able to go back into the group, he could function at an acceptable level musically. In no other activity was there this fluidity of movement between individual and group work. This patient also had some problems with masculine identification, but within the band, he could still be a "he-man" while enjoying an artistic pursuit. His first success in group endeavor came in the music group, and later he was able to participate in sports groups.

Case 2. This 18-year-old girl was a patient in a state mental hospital. Before the introduction of a new regime in the hospital treatment program, she had succeeded in manipulating the staff to her own purposes. For months, she had been "controlling" the patient dances and community sings. She had a fairly nice voice, and she had used the community sings to show off, to organize the younger patients, to take over the sing, and to do solos and small group work on the stage. In order to stop this acting out behavior, the staff decided upon an attitude of firm kindness.

The therapist took control of the dances and community sings, and the patient had no opportunity to sing solos or arrange for groups to sing special numbers. At the dances, the therapist selected the records or turned some of this responsibility over to patient planning groups. The patient was excluded from these groups. Whenever she tried to manipulate the therapist or patients, this behavior was pointed out to her. On several occasions when she was unable to control her own behavior, she was removed from the activity. Since she needed a socially acceptable means of receiving praise, it was decided that she should be allowed to be a member of the chorus that was performing for the Christmas pageant. At the first full rehearsal, the patient talked to her neighbor, ignored directions, sang before cue, made snide, stage-whispered remarks about the therapist, and generally disrupted the entire group. The easiest way to solve this problem would have been to remove the patient, but the aim of her treatment program was to teach her to control her aggressive behavior and to drop her manipulative attempts. The therapist moved her into another section of the choir, where she was placed between an attendant and a nurse. After rehearsal, the music therapist who, after some months of work, and despite being in the role of chief "frustrator," had established a good relationship with the girl, visited the ward and talked with her. It was pointed out how obnoxiously she had acted, and that more had been expected of her. The therapist concluded by telling the patient she could have one more chance before she was removed from the program. At the next rehearsal, the patient was quite cooperative and seemed to be making a real effort to conform. After the rehearsal, she came to the therapist and said, "I'm sorry I made such a fool of myself the other night." The therapist agreed that the patient had indeed made a fool of herself, but accepted her apology. At the same time, the therapist informed her that the limits were still there and that further disruptive behavior would result in dismissal from the group. The girl was highly motivated to remain in the group. She controlled her behavior and was able to contribute to the success of the performance. She had learned to use her voice as a means of earning praise and could feel a sense of pride for contributing cooperatively to a group effort. Part of her discharge planning included arrangements for her to participate in a church choir when she returned home.

Case 3. This 18-year-old female was admitted to a private psychiatric hospital with a long-term history of schizophrenic reaction. At the time of admission, she was decompensated, almost completely withdrawn, careless of appearance, and at times extremely hostile and aggressive. The case history given by the family stated that the patient was quite a proficient pianist. She evidently had used her practice time as a means of escape from threatening interpersonal relationships.

The patient was assigned to music to help reestablish her defenses and to give her socially acceptable gratification. The therapist went to the patient's room and invited her to come to the music clinic. The patient responded to the invitation by telling the therapist to "go to hell." For five days a week and for several weeks, this same interchange took place. The therapist would invite the patient, the patient would give the same response, and slam the door in the therapist's face. Since the attitude prescribed was passive friendliness, the therapist would retire, and sit in an adjoining waiting room for the remainder of the hour which was assigned to the patient. The patient finally stuck her head out of her door and asked the therapist why she was sitting out there. She was told it was her time, and the therapist had nothing else to do. The patient told the nurses to keep the music therapist out, but the music therapist persisted.

After a period of six weeks, the patient told the therapist she would go to the music room in "self-defense." The therapist took her to the music room, showed her where the music was filed, and stayed away from the piano while the patient sight-read and selected music she liked. During this time and for several weeks after, the therapist did not intervene when the patient came to the music room. When the patient asked for suggestions about what to practice, the therapist recommended suitable exercises and repertoire. As the patient became more comfortable, the therapist took a little more active role in structuring the lesson time. The patient began working to regain her technique. She still had to be accompanied to her lesson, but was ready when the therapist called, and was willing to leave when the lesson terminated. The therapist was still maintaining a passive, friendly attitude toward the patient, and the patient suggested some duets which the therapist had taken care to place on top of a pile of music. The patient had more technical facility than the therapist, and the duets provided a competitive situation in which the patient could excel. At first, the duets were more of a "race" than a musical production, but eventually the patient began to work closely with the therapist and to really enjoy the cooperative effort, not only for the sake of the music but also because of the relationship. By this time, the patient had begun to go to other activities and to form tentative relationships with other staff members and patients. Her peers and the staff members had begun to praise her musical accomplishments, and she occasionally played the piano in the recreation hall. These "performances" brought her attention and recognition.

The prescribed attitude was changed to one of active friendliness. The therapist asked the patient to be accompanist for the girls' glee club. The patients also petitioned her to help them, and she accepted. This participation required the patient to be on time for rehearsals, to be able to take firm direction, to keep up with the music, etc. She gained recognition for her contribution to the group. As she progressed, she played for the outpatient club, was accompanist for their chorus, and when she went to school, she acted as accompanist for a group.

Since this patient had been skilled in music before hospitalization, this was a promising area of therapeutic approach. The flexibility of the music program made it possible to reach the patient first through a one-to-one relationship. Later, the use of her skill as a musician in groups was a way to help her to become comfortable with persons and gave her the gratification she needed. And finally, she was encouraged to use her skills in her life adjustment outside the hospital.

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PART V

MUSIC THERAPY FOR GERIATRIC PATIENTS WITH BEHAVIORAL DISORDERS

VANCE W. COTTER

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MUSIC THERAPY FOR GERIATRIC PATIENTS WITH BEHAVIORAL DISORDERS

Introduction

Vance W. Cotter

The problem of an aging population has become of interest and concern to many people. Statistics demonstrating increasing longevity are well known and publicized. Friedman reported:

> Since 1900 the nation's population has changed from one in which only one in 25 persons was 65 years of age or over to one in which approximately one in twelve is in the older ages and in which one of every seven adults is an "aged" person. In the United States today approximately sixteen million persons are 65 and over, and by 1975 the number is expected to exceed twenty and one-half million.[1]

Similar statistics were quoted in earlier publications by Kramer[2] and Schuster.[3]

The phenomenon of an aging population has produced a need for intense research and experimentation in the area of gerontology and geriatrics. Barron defines the former as "the systematic multidisciplinary study of the patterns and meanings of aging," and the latter as "those techniques that aim to control and reduce its problem aspects."[4]

The ability of the older person to make satisfactory adjustments to change seems to be related to the degree of success he has had in making earlier life adjustments. Weinberg has made it clear that:

> . . . mental illness in aged persons is not hopeless any more than at any other time of life. And whether an aged person's mental disease is organic or functional, his behavior during his illness will be determined by his character throughout life. If he has emotional difficulties throughout life, they will be multiplied by advancing years.[5]

Wolff seemed to be in complete agreement when he stated that:

> The person who has always had emotional equilibrium will tend to retain it in old age. The person who has had only superficial control of his aggressive and destructive drives will suffer more emotional disturbance when the powers of emotional control break down in old age. . . . The life pattern of the individual will be important in determining whether his reaction to stress will be withdrawal, suspicion, irritability, hostility, depression, and rage, or one of the more adaptive defenses.[6]

There is evidence that a large number of people are not making satisfactory adjustments to old age and, consequently, are being institutionalized for care and treatment. Wolff,[7] in 1955, concluded that more than 40 percent of the patient population in the state hospital in which he was employed was over 65 years of age. Research by Malzberg[8] definitely showed an increase from 1920 to 1950 in the number of geriatric patients who were institutionalized.

Beard[9] reported that recent research findings in the fields of biology, medicine, nutrition, psychology, and sociology raise doubts about some earlier assumptions regarding old age. Economic, social, and psychological factors may also determine the appearance and change of symptoms of senescence. The opinion that old age is a period of inactivity until death (because of organic damage) is considered now to be invalid. The decline and deterioration of life functions originally were believed to be mainly organic, but Meerloo,[10] Krusen,[11] and Donnelly[12] indicated that there is a close relationship between psychological functions and environmental influences in the production of symptoms in the geriatric patient. "Society doesn't invest in the older person because he has no future. Each older person as a member of civilization naturally has this same attitude. As he grows older, he begins to feel depreciated--and actually to depreciate as a result."[13]

However, it is quite certain that organic deterioration will alter the physical and verbal behavior of the geriatric patient. General arteriosclerosis, cerebral arteriosclerosis, and senile brain disease are conditions which play an important part in the production of symptoms. All organs and tissues are weakened or damaged to a certain extent due to variation or cessation of the circulation of the blood supply.[14,15] Behavioral symptoms such as disorientation in one or more spheres (time, person, place), memory loss for recent events, impairment of sight and hearing, defective judgment, and less efficiency in performance resulting from brain damage were described by Wolff[16] and Ginzburg.[17] Weinberg said that "personal habits decline, . . . attention wavers often" and the individual "may become irritable or jealous or even engage in violent acts. Sleeplessness and restlessness also are frequent."[18]

Emotional instability and a diminished rapport with reality are words often used to describe the behavior of the geriatric patient. Research by Vinson[19] demonstrated that there was no significant difference in psychological test scores of geriatric patients with organic brain disease and those without organic brain disease. Rorschach test results show the patients to be capable of testing reality although they are emotionally labile. Berard et al., in a survey of dreams of older persons, found that "the findings leave little doubt that the aged person is capable of sensitive emotional response even in the presence of organic brain damage."[20]

Sociocultural factors and organic impairment have an effect on the behavior of the geriatric patient. The present trend of thought emphasizes the benefit of treatment for the behavior of old people who are emotionally unstable or who demonstrate a diminished rapport with reality, even though organic impairment does exist. Experimental evidence reinforces this trend. Music has proven to be very useful in the treatment of the geriatric patient.

Effects of Music on the Behavior of Geriatric Patients

The fact that music may offer a "structured creative experience" leading to behavior which is described as "gratifying," and to behavior which is termed "socializing," offers the music therapist an excellent opportunity to use music in the treatment of geriatric patients. A basic musical approach for the geriatric patient who has diminished rapport with reality requires the use of simple, well-structured rhythm as a nonverbal stimulus. Andrus, after an 11-month study, stated:

> Rhythmics, an essential part of the program, was designed to reactivate enjoyment of bodily movement, to provide remedial work for the skeleto-muscular problems so frequent in old age, and to effect reconditioning of motor functions. It also provides an avenue of expression on the nonverbal level.[21]

There are differences in rhythmical response at different age levels. Roth[22] showed a significant difference in the performance of a psychomotor task (tapping) by an older group (aged 60-75) as compared to a younger group (aged 30-35). The older group proved to be less flexible in following deviations from their habitual tapping speed. Wells[23] described a well-planned music program and placed special emphasis on the value of rhythm bands for geriatric patients. Marked improvement in patient behavior was observed. The patients seemed more alert, were less incontinent, increased in mobility, and improved in personal appearance.

Music therapists also employ a variety of musical activities when working with geriatric patients, i.e., singing, listening, and playing instruments. An important therapeutic goal in using various music activities is to offer the patient an opportunity to respond individualistically. Older people no longer may be workers, but they sometimes become creators and "music therapy should be used as an outlet for the creative impulses of older people."[24] Wallin stressed the need for individualization in the psychological, educational, and social adjustment of the aged because of the great individual differences among them. Interesting and creative activities which are rewarding constitute a "unifying, integrative, objectifying, rejuvenating force."[25]

A survey of the literature reveals many examples of creative musical behavior among geriatric patients. Frequently, therapists observe extra-musical behavior which is an indication of an unexpected rapport with reality, control, and appropriate expression of emotion. Silver employed group singing with senile psychotic patients. The patients seemed to enjoy the folk songs with which they were acquainted. Due to the short attention span, it was found that music was "best used occasionally and in small amounts."[26] It was concluded that the activity was a pleasurable experience and resulted in increasing group cohesiveness. A positive atmosphere of sociability and entertainment was noted, and the cleanliness, morale, and general behavior of the patients seemed to improve.

Hall[27] reported on a six-week, well-planned ward program involving 25 ambulatory female patients. The musical activities were singing, dancing, rhythm band, and listening to recorded music. The charge nurse reported anticipation and pleasure on the patients' part. Certain persons, who had exhibited indifference, hostility, and resentment to people and objects pertaining to the ward situation, showed positive behavior changes during the series of music sessions. The entertainment factor, personal attention, and anticipation of the daily music session were considered to be responsible for the behavior changes. It was suggested that psychological and physical needs of the patient were met, and that frequent contact and communication with the therapist was necessary for best results.

Altshuler[28] described a therapeutic procedure which placed hyperactive patients in one group and hypoactive patients in another. Musical activities used were singing, walking, dancing, and mild gymnastics to music. The treatment goals in each session were to establish a setting in which an atmosphere of warmth, acceptance, calmness, and tenderness was present, and in which nearly total participation and engendered spontaneity led to enjoyment. The environmental setting was one in which there was minimal interference, and where heavy ward traffic and noise were not present. All behavior which was appropriate to the musical situation was recognized promptly and positively reinforced with encouragement. The therapist addressed the patients by their first names or nicknames.

The main musical rhythm used with the geriatric patients was steady, simple, and direct. Syncopated rhythm was avoided. A test, in which each patient's normal walking speed was recorded, was utilized to establish a mean tempo. Largo, adagio, andante, and moderato were the tempi most welcome on the geriatric ward. The tone color of stringed instruments was preferred to that of brass and percussion. Favorable listening response was observed when the music was soft, melodious, familiar, and not too long.

Hart[29] utilized a variety of music activities in a nursing home. The treatment goals were to provide areas of musical activity which produced creativity, self-esteem, group interest, and cooperation. Musical activities were conducted four times a week for nine weeks, each period being 45-60 minutes in length. The therapist reported behavior as it appeared in the musical situation. Increased interest in musical activities was inferred because of the anticipation, participation, and enjoyment made evident by the patients' behavior. Statements from the manager, attendants, and the music therapist were in agreement.

Studies by Cotter,[30] Griffin,[31] and Kurz[32] demonstrated that planned, recorded music and participation in music activities had a beneficial effect on the behavior of geriatric patients. From the data, which were statistically evaluated, the following results were noted: an increase in appropriate behavior; reduction of aggression; reduction of physical and verbal reaction to hallucination; reduction of frequency of incontinency; an increased interest in musical activities; improvement of personal appearance; and a lowering of the level of undesirable patient noise.

The following statements seem to summarize the use of music with geriatric patients:

1. The treatment goal is to present music as a structured experience which leads to gratification and, ultimately, to socialization.

2. The therapist should maintain a permissive attitude and reinforce creative and other appropriate behaviors with encouragement and praise.

3. Creativity, or the unique behavioral response, can be elicited in a variety of individual or group musical activities, i.e., singing, instruments, rhythm band, listening, and dancing or physical movement.

4. A basic musical approach in dealing with behavior which shows a diminished rapport with reality is the use of a simple structured rhythm. Tempo is important. Tempo variations should be avoided in clinical practice.

5. Results are primarily evaluated through clinical observation by the therapists and nurses or attendants. Most results are inferred after behavior occurs which seems to demonstrate awareness (anticipation of musical session), stimulation (participation), and gratification (enjoyment).

Clinical Descriptions

Some specific procedures of music therapy for geriatric patients are described in the following papers. Treatment goals, both general and specific, are presented, and case reports illustrate ways in which music therapy can be used to help meet these goals. Toombs describes practices that she has found to be successful in both Veterans Administration and state hospitals. She illustrates these practices with case reports and concludes with a list of typical treatment goals of music therapy for geriatric patients. Browne and Winklemayer outline a structured program of music therapy and present case reports which describe some of the influences that such a program has on geriatric patients. The article by Folsom points out some of the unique advantages that music therapy has for these patients, and the case report by Henneman illustrates the way in which a series of music sessions provided a means for altering social behavior.

Music Therapy for Geriatric Patients

Mary Ryder Toombs

Many different musical activities have been found useful in music therapy for geriatric patients. Listening to music on the hospital ward has been utilized. The musical selections played were decided upon prior to the session. Pieces were chosen which had special meaning to older people. Some of the more popular music included standard protestant hymns, Strauss waltzes, polkas, and songs such as those written by Stephen Foster. Geriatric patients preferred listening to this music at a moderate to low intensity level. (Often they seemingly slept during the session, but on most of such occasions they made comments about a particular piece, which indicated that they had been aware of the music.) Recorded music was highly acceptable, and piano and guitar music seemed to be preferred more than any other kind of instrumental music.

Group singing was an activity frequently used. A ward composed predominantly of geriatric patients made it possible to choose songs that were representative of most of the patients' backgrounds. The use of single song sheets of stiff paper with the songs clearly numbered and the words typed with large type proved to be very helpful, since most geriatric patients encounter difficulty in seeing words of ordinary size on a printed page. The single sheet minimized chances of the patients becoming confused and losing their places. When the therapist had to work alone, it was more beneficial to avoid the song sheet altogether and to choose songs familiar enough so that the patients were able to sing them from memory.

Another music activity used frequently with geriatric patients was the dance. On the ward, this usually meant the simplest form of dance activity, i.e., exercise dance movements within the circle formation, as described in Music Therapy 1957.[33] Although this article referred particularly to a ward of very regressed patients, the same technique was used at a Veterans' Administration hospital, but modified to fit the physical limitations of individuals on the geriatric ward. The dance movements usually consisted of slow, swinging, or circling movements of arms, legs, head, hands, and feet. The more active geriatric patients, such as manic-depressives in the manic stage, were included in square dancing with some other psychiatric patients. The physical condition (especially heart) of the active patients had been ascertained previous to the activity.

On several occasions, different geriatric, male patients responded to recorded waltzes by spontaneously arising from what appeared to be a "dozing" position to waltz with the therapist or a nearby female aide. Frequently, they would sit down as soon as the waltz stopped. However, sometimes the dancing of the waltz served as an "ice-breaker," and the patients would then converse freely with the music therapist or the aide with whom they had danced.

Rhythm band was utilized in one state hospital to offer variety. The rhythm band was used one period, a group sing the next period (two days later), and a dance session the third period (two days later). This approach of using rhythm instruments alternately with other kinds of group participation to music was believed to be the best means of meeting the needs of a ward of low-functioning men. If the geriatric patients were physically able to play the sticks, bells, drum, etc., they usually enjoyed this rhythmic activity. If they could not handle the instruments readily, a rhythm band was only another frustrating and defeating experience unless careful, gentle aid was given. When the rhythm band experience was mixed with other music activities, the patient who met defeat or frustration in one activity frequently found rewarding satisfaction in one of the other activities. Also, the pleasure or satisfaction gained in one activity was great enough to carry over into one of the other musical activities until, gradually, the majority of the geriatric patients were, at least, making an effort to participate in all of the activities.

Trained or talented musicians have been discovered among patients. This has been true with chronic, long-term schizophrenic patients and institutionalized geriatric patients, male and female. Many geriatric patients function at their highest level in a musical performing group or ensemble.

An elderly, depressed male patient in a state hospital was referred for music therapy on an individual or small group basis. In the referral, the physician indicated that the patient had played the violin very well and had studied enough to sight-read music readily, if motivated. Since this man was preoccupied with suicidal thoughts and guilt feelings about his wife's recent death, the therapist spent many sessions taking the violin to his bedside, visiting with him about himself, his family, and music, and gently, but persistently, inviting him to play the violin. Finally, the patient played a few strains on the violin, then some phrases, and ultimately, he agreed to walk across the hospital grounds to the music therapy area to join three other male patients who also were violinists. The ensemble formed by these four violinists performed in church and on two programs. Music was a means of reaching the geriatric patient and relieving him of his deep depression for a few hours a week. Due to his advanced age and his heart condition, only anti-depressant drugs, milieu therapy, and music therapy were prescribed for him.

In both state and Veterans' Administration hospitals, "fiddlers" were often found among the geriatric male patients. These "fiddlers" seemed to thoroughly enjoy performing for anyone who would listen. They always played "by ear." Sometimes they played for square dances, but usually on talent shows and at parties.

A geriatric, manic-depressive patient was on industrial assignment to the music therapy department of a state hospital. Besides keeping the department swept and dusted, he carried instruments, music, and music stands from the department to any other area of the hospital where they were needed. He sang bass in the men's barbershop quartet, played baritone horn in the band, and sang each Sunday in the church choir. While his great energy was often a bit more than the music therapy staff could tolerate, he was benefited greatly by his daily musical experiences, and, in turn, he contributed much to the entire program of music therapy.

One geriatric patient on the admission ward of a Veterans' Administration hospital was referred for individual music therapy because he believed that if he worked on his singing again (having formally studied voice many years ago), it would help him to lose some of his depression and gain better control of his emotions. Because of his strong religious beliefs, he was asked to sing only spirituals or sacred art songs. Because of age, his breath control and tone quality were beginning to weaken, but he still sang with artistry. He often grew very emotional while studying his songs. His lability was not pointed out, but accepted, and he was urged to resume singing when he felt like it. He was frequently critical of his singing, and was eager for help from the therapist. At the end of his music lesson, he always expressed appreciation. He was to be hospitalized for a short time and, therefore, was not asked to perform or join others in a choral group. Instead, he was encouraged to rejoin his church choir when he returned home, and to continue his singing for his own satisfaction.

One interesting experiment that was suggested by a resident in psychiatry at a state hospital was a music listening project on an individual basis with a paranoid, fragile appearing lady in her 80's. The psychiatrist had tried many methods of treatment with no success. At that time, drugs were not in use at this hospital except on a very limited basis. Upon learning that she loved protestant hymns, the psychiatrist requested that the music therapist work with the patient daily in a passive music listening situation as a "last resort" approach to attempt to make contact with her. Her primary symptom was preoccupation with thoughts of death, and a constant reference to "being fed her children by those people on her ward." She had refused to eat for several months prior and, at that time, was being forced to eat.

The patient was very resistive to the therapist and the music. A great degree of difficulty was encountered in bringing her to the music department and engaging her in the activity while she was there. Problem behavior included placing fingers in ears, mumbling about "they are trying to feed me my children," and attempting to leave before the session was concluded. Choral and instrumental church hymns were played on the phonograph. After several weeks of daily half-hour sessions, she relaxed sufficiently to sit quietly and voluntarily in the music therapy listening room. Although she never told the music therapist that she liked the music, after a month or more she told the ward aides she had been to music to listen to hymns. When asked by the aides if she liked the music, she said, "Yes." Also, she started being ready to go to the music room for the listening, and she began to eat regularly again. Neither the psychiatrist nor the music therapy staff ventured an explanation for the reason she began to eat her meals again, but she no longer expressed paranoid delusions about her food being her children.

Probably, the music therapist needs to be more flexible in his approach to geriatric patients than with any other age group of psychiatric patients. Much is unknown or uncertain about predicting the behavior of these patients. Each new day may bring biological changes and emotional changes within the patients, and the speed at which these changes occur varies markedly. However, some very general principles are suggested for the therapist who deals with geriatric patients:

1. Use gentle persuasion rather than firm insistence in getting the geriatric patient to join a group.
2. Use music which is familiar and liked by the geriatric group with which you are working, in spite of the monotony or boredom it might bring to you.
3. Be as aware of the patients' physical and mental limitations as possible.
4. Modify the type of music activity to meet these limitations, and keep music periods short enough to maintain their attention. Allow the patients to "catnap" during listening sessions, but engage them in conversation when it is appropriate and they seem to want to talk.
5. Be firm with hyperactive patients for their protection and for the general wellbeing of the group.
6. Expect and accept some lability or inconsistency in geriatric patients' responses.

Some of the applicable treatment goals in dealing with geriatric patients are:

1. Socialization. Through the influence of music in a group activity, the therapist can offer interaction with a staff person or another patient.
2. Exercise. Through simple body movement to music, one can help the patient maintain good circulation and muscle tone. With the more active patients, it gives them a healthy outlet for physical energy.
3. Gratification. Creative activity produces behavior which, when reinforced properly, may lead to a feeling of self-esteem.
4. Contact with reality. Music either helps maintain contact with reality or helps make brief contacts with reality during the music sessions.

5. Relief of self-concern. During the music sessions, the patients extinguish self-pity and concentration on somatic complaints.

6. Development of group feeling. Patients derive satisfaction and a sense of well-being from belonging to a group in a music session.

A Structured Music Therapy Program in Geriatrics

Hermina Eisele Browne
Richard Winklemayer

This paper describes a type of music therapy program for geriatric patients that has been developed over the past 16 years at two different state institutions. Structured music therapy programs in these institutions were conducted on the ward and also in the music therapy departmental quarters. Not only female and male patients, but ambulatory and nonambulatory patients, were housed in separate quarters. Music therapy sessions on the wards were held in day-rooms which were well ventilated, comfortable, and pleasant. Some ambulatory patients participated in individual and group activities in the music therapy building.

Objectives of these programs were similar to those of other therapeutic programs and in keeping with the age and physical condition of the patients, e.g., to stimulate activity, relieve boredom, tranquilize the overactive, induce the desire toward self-help, provide an outlet for energy or frustration and, in general, raise the tone or morale of the entire unit. The programs were conducted at least once a week and were held twice weekly when time and additional personnel were available.

The format of these structured music therapy programs was quite similar in both institutions. Each session started with group singing of selected, familiar old hymns; then the patients selected hymns. All patients participated in this hymn sing, and various responses were observed: singing, humming, rocking, foot tapping, and hand clapping. Next in favor came old ballads, some by Victor Herbert, some by Gilbert and Sullivan. A portable organ was used for accompaniment. An organ is nearly always far more effective than a piano.

After the singing, a listening session was held. Recordings of music by Beethoven, Mozart, Mendelssohn, and Schubert appeared to elicit the most pleasurable responses. Complicated rhythms and structure were too much of a strain for sustained listening. Next was a rhythm session with some patients dancing, and others playing rhythm instruments.

The therapist regulated activity only within the limits of the session, but left the actual response to the patient. If no response was evident, then the therapist tried to induce some form of activity by offering the patient a desired instrument. The final part of the session was designed to reduce the general level of excitement. The sessions were closed with the singing of some favorite songs.

Patients were assigned to individual or small group activity in order to stimulate their interests or to give them a sense of satisfaction in achievement. Frequently, patients requested the activity because of a special interest. The physician recommended or approved all assignments. A few geriatric patients were assigned to the music department for small group activity, such as rhythm band and choir. In both institutions, these elderly patients were regular in attendance and provided the nucleus of this group activity. Short-term patients also were assigned to these units, but came and left according to their treatment program. This meant that the music used for choir, and that for rhythm band, varied from time to time in accordance with ability, number, and interest of the group. Such activities were held in the music rooms of the department. The choir sang for church services in the auditorium and on wards at Easter and Christmas, and the rhythm band presented programs for patients on various wards.

Individuals participating during a music therapy program on the wards usually did so at their own request, or with some prompting from fellow patients or personnel. Solo vocalists nearly always received a rousing reception even though their voices left much to be desired musically. Sometimes, they forgot words and supplied their own, which provided much amusement for the group. Solo pianists were, in general, much better musicians, but they could not play music other than that which they had learned prior to hospitalization. Most of it was stereotyped and repetitious. While the vocalists performed, the group listened attentively; however, when pianists performed, the group began to lose interest, talk among themselves, or do other things.

One patient was able to play the "Bluebells of Scotland" very beautifully. The physician assigned her to individual sessions in the music therapy department for further instruction. At the time of assignment, she was greatly dishevelled, unclean (except when attendants bathed her), ate little, was mute and listless, and inactive on the ward. Because of her condition, she had to be escorted to and from the music therapy workshop.

Lessons were brief at first, with no conversation on the part of the patient. However, after two months of two sessions a week, the patient showed some progress in behavior, i.e., she was neat and clean, usually ready for the therapist, started to converse, asked pertinent questions about the music, and, in general, showed considerable improvement. Musically, there was no improvement beyond the first grade level. However, she lost her apathy, talked about her home and family, mentioned other interests, and showed a keen sense of humor. For lack of a therapist, after two years, it was necessary to drop this patient from individual sessions. She accepted an assignment with the housekeeping department and has continued her adjustments toward more normal living, and now has frequent home visits.

Geriatric patients who were ambulatory also attended music appreciation sessions in the workshop. Many of them took part in the actual program. The group was composed of young and elderly patients with varying types and degrees of illness. A patient would be asked to read about a selected composer and then to present the material at the next weekly meeting. Others would be asked, or they offered, to present some composition by this composer at that time. If necessary, the patient was aided in his preparation so that he felt comfortable in the presentation. These sessions began with group singing of familiar requests. Then the speaker talked about the background and life of the composer, interpolating suitable musical selections at appropriate times. At the conclusion of the talk, the therapist added information, if necessary. Then the group listened to selected recordings, and general discussion of the music followed. Sessions were concluded with a short group sing. The older patients participated more frequently and to a greater degree in the discussions than the younger ones, but the younger ones participated more by singing or playing selected works. In some instances, the composer's affliction was discussed, as well as his way of overcoming it, or even his making it an asset. Attendance was voluntary.

Case Studies

The following cases are examples of individual participation in the music therapy program.

Case 1. J was assigned to the music therapy department first for small group activities (choir, rhythm) and individual vocal lessons. Finally, he was assigned to music on a full-time basis so that he could be usefully occupied. He received no drugs or other treatment and was assigned to the music therapy department as the most likely place for therapeutic contact. Despite a state of confusion, irrelevant discourse, slouchy posture, and ambling gait, he was gentlemanly, neat and clean in appearance, and well spoken. He developed a keen interest in the work and was a staunch supporter of chorus, choir, and music appreciation. He accepted secondary roles in operettas and other musical shows. He also learned how to repair piano keys and bridle straps, after watching a professional. Since he was not permitted to use metal tools, he made the necessary ones out of wood, under supervision in the woodwork shop. When it appeared to him that most of the repair work was completed, he slyly and deliberately broke hammers and bridle straps so that he could have something to do. It was explained to him that other patients damaged the pianos frequently, and he would have plenty of work for some time to come. After this, there was no further need to check on him, and he continued this service for six or seven years.

In the structured mood group, J was among the most helpful of the patients who were assigned to help with severely disturbed patients who were mute and uncooperative. He helped by finding the right pages for patients, was gentle in helping patients to move their arms in the expressive movement session, and months later, when the group was able to dance, helped those who were fearful, hesitant, or rejected by other "helpers."

His paranoid tendencies became less marked and were evident only when he thought he was being neglected or left on the sidelines. Then he clowned, sang wrong notes, sang so low it was a grumble and no longer a tone, or began to discuss his former activities on the outside--such as being an important owner-manager of an umbrella factory, or playing the violin. Since he could not play the violin and no mention of a factory was made in his case history, this was fiction. J was placed on family care at the age of 73. The therapist visited him in his new surroundings on several occasions and found that he had made excellent adjustments. The most recent visit, during his 78th year, found him in excellent health.

Case 2. L was a voluntary patient for the second time. The first hospitalization was at age 39, and the second at age 43. Upon admission, however, her personality made her seem so much older than her chronological age that she was considered a geriatric case. She was classified both times as a schizophrenic, paranoid reaction. She was hesitant and anxious while expressing a great desire to be accepted as a vocal student. "All my life I wanted to sing and never could be a member of a chorus because I had no proper clothes. We were too poor." This was her reason for wanting lessons now. A daily 20-minute period was arranged, with the approval of the clinical director. Concurrently, she was also assigned to the commissary and to occupational therapy.

L was told that the therapist could tell her what to do and show her how to do it, but that she would have to use much effort in order to learn to sing. She was a very apt pupil. The first job was to develop proper tone production; scales for pitch and breath control came a little later. For three months, she worked on the middle voice and then was allowed to sing alto with the choir. Her response was most gratifying. "This is the happiest day of my life, singing with a group." Continuing her instruction and participation in the choir, she gradually developed her true soprano voice and was then placed in the soprano section of choir and chorus. During the time L was in music therapy, she reverted to normal behavior for her age. She made tremendous strides in her rehabilitation efforts.

When it became time for her to plan for discharge, she discussed the possibility of having a vocal teacher in her local community. This was arranged, and appropriate plans were made for her to join a community chorus. Upon discharge, she made immediate contact with the teacher and the chorus, and thereby began a series of readjustments toward normal living. For the chorus concerts she was required to wear evening gowns. She attended a course in dressmaking at the YWCA in order to save her brothers the expense of purchasing these gowns and, thereafter, made all of her own clothes. Her brothers, feeling that she was making a special effort toward readjustment, decided to pay for her lessons on a twice-a-week basis.

Some Clinical Uses of Music with Geriatric Patients

Geneva S. Folsom

The music therapist can be one of the most important adjunctive therapists in working with elderly patients because these patients are limited in physical capacity, and their recreational pursuits, consequently, are limited. Music offers many outlets for these patients, and can be used to help in reorientation programs for them. Music should be an integral part of the remotivation process. Many of these patients can be restored to adequate function, and the music therapist can provide a link between the hospital and the home environment.

Music is one of the few interests many people have in common. It is of particular value in working with the aged in the process of relearning, in the process of reestablishing orientation if they are confused, and in giving them an interest which can be carried back to their homes. There should be special emphasis placed upon the use of music as an agent to promote physical activity.

In a ward of geriatric patients at a state hospital, it was found that the patients, apparently, were getting the most out of the activity if it met two times a week. Music three times a week was tried, but with all the other activities, this seemed to diminish interest. So the musical activity was cut back to twice a week. This proved to be very successful. Patients looked forward with enthusiasm to the music sessions. The nursing section was well trained and helped promote this enthusiasm, so that when therapists came to the ward, everything was in readiness. The patients had been reminded early in the morning that this was the day for their music activity. They were encouraged to consult a schedule on the wall regularly.

According to the nursing staff, the music activity was one of the most successful hours of the week for these patients. Even though some of them did not participate actively, they did enjoy observing and listening to the other patients sing. Because this was a mixed ward, some simple square dancing was done.

The unit had a high turnover. The only qualifications for admission to this ward were that the patient be over 65, be emotionally disturbed, and able to walk. In several instances, even this last requirement was removed, and wheelchair cases were taken. There was such a rapid rate of turnover that planning had to be done much of the time from day to day. Gratification and accomplishment were the immediate goals.

Barton[34] has suggested that entertainers and musicians be invited to play for patients on the ward. He also mentioned audience participation in quiz games or group singing which added enjoyment to a group meeting. Although no outside entertainers were used, patients from other wards were used, and as often as possible, patients on the geriatric ward were welcomed as performers. Several times it was discovered that someone who had been sitting in the singing group was able to play the piano, so he was encouraged to accompany. This freed the therapists to move freely among the group. Several of the patients had good voices and were encouraged to sing solos during a group sing, and in special church music.

Case Report

Case Reported by Sally Henneman

S was a 78-year-old cardiac patient with occasional seizures, who had resided in the hospital for approximately 35 years. He did much grimacing, was often combative, and would yell and flail his arms at anyone who came too near him. He was considered to be "out of contact" most of the time, and was the only truly custodial case on a ward of elderly, chronic, regressed schizophrenic patients.

Group singing sessions were conducted on the ward once a week for six months by the music therapist. When the ward sings first began, S would not join the group, but sat at the opposite end of the day hall. When invited to join the group, he would either begin to yell or walk away. After approximately six weeks, S joined the group. He did not sing, but sat with his head down during the entire hour. When given a song book, he threw it on the floor. As time went on, he consented to hold the song book, but would participate in no other way. This behavior continued for the next few months.

The therapist believed that a closer relationship with the patient might help modify his behavior in the group singing. Frequent visits were made to his ward to visit him. At first, S would not acknowledge the therapist's presence. Later, he would glance at her when she asked him to, and finally would shake hands with her. Although S related in a negative and hostile manner, the fact remains that he did relate to another individual, and this was considered to be an improvement. At the end of the six months, he would walk up and down the day hall with the therapist.

After the group had met for approximately three months, the therapist observed the patient smiling while the group was singing "School Days." This song was included in each session thereafter, and the patient continued to smile each time the song was sung. The entire group began to look forward to this time in the hour, would join the therapist in telling S that they were singing the song for him, and would encourage him to sing with them. Finally, after nearly five months, S did sing "School Days." The younger and more alert patients cheered and clapped. This momentarily frightened the patient, but he continued to sing the song each week and would sometimes join in singing "Let Me Call You Sweetheart." He eventually shared a song book with another patient, and only very rarely did he exhibit inappropriate behavior such as yelling or hitting.

The obvious treatment goals in the case of S were to encourage him to respond appropriately to his immediate environment. The group music situation itself, the special individual attention from the therapist, the permissive and matter-of-fact attitude, and the support given to him by other members of the group provided a non-demanding, nonthreatening atmosphere in which the patient acted in a socially acceptable manner.

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PART VI

MUSIC THERAPY FOR THE MENTALLY RETARDED

BETTY ISERN

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MUSIC THERAPY FOR THE MENTALLY RETARDED

Introduction

Betty Isern

The use of music therapy for those who are mentally deficient has grown more rapidly in recent years than any other use of music therapy. One reason for this remarkable growth has been the increased emphasis on care and treatment of the mentally retarded by state and national agencies. A second and equally important reason has been the deepening realization of the unique applicability of music as a therapeutic and educational instrumentality for helping those who are mentally retarded. Mental retardation is associated with impairment of adaptive behavior, or social adaptation.

As one reads the literature, the use of music for the mentally retarded is found generally in one of three different settings: (1) special education, (2) therapy, or (3) a deliberate combination of education and therapy. However, the emphasis of an institution or setting may be, quite clearly, education or therapy. In this present discussion, we are concerned primarily with music therapy, although realizing full well that there is education in therapy, and that educational goals are a constant motif in the pattern of treatment. We are concerned with the emphasis wherein the retardate undergoes testing, evaluations by the medical staff, and observations by other staff members. On the basis of the combined indications, a treatment plan is determined. The goal of the treatment plan is to bring about changes of behavior in the retardate so that he will be better able to adapt and function in his environment. The music therapist uses music to assist in achieving a therapeutic relationship with the retardate, and the therapeutic potentials of music are used to realize predetermined treatment goals.

Only in a relatively few places is this ideal function of the music therapist achieved. It is not always possible to have the necessary "ingredients" and concepts for an ideal therapeutic situation. However, a therapist working in a situation less than ideal can yet use music therapeutically. This can be accomplished if the therapist is aware of the therapeutic potentials of music, if the therapist is aware of the behavioral problems of the retardate, and if the therapist understands how to use the music and the music activities to accomplish the desired change in behavior so that the retardate may function more adequately in his environment.

Definitions

Many terms and definitions have been used in descriptions of mental retardation. Professional people in the various disciplines have attempted to define and classify mental retardation, but these definitions have usually reflected variations in orientation and training. Thus, one is confronted with confusing terminology and definitions of such terms as feebleminded, ament, mental defective, moron, idiot, and imbecile. The definition of mental retardation which will be used in this discussion is as follows: "Mental retardation refers to sub-average general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior."[1] This definition is generally accepted by most persons in the field.[2] It is useful and pragmatic because it includes reduced intellectual function and impaired social adaptation. Other definitions, for the most part, are concerned with either intellectual function or social function as their sole criterion. Heber, in justifying the use of the two-dimensional definition, says:

> All abnormalities of human behavior represent impairments in social competency and, consequently, this as the sole defining characteristic does not serve to distinguish mental retardation from other disorders of behavior. Subaverage psychometric intelligence is inadequate as the sole criterion of mental retardation since our tests of intelligence are only predictors of certain aspects of behavior and are, as predictors, subject to a degree of error: Regardless of what test score was used as a criterion we would find individuals below the cut-off score whose social adaptation was adequate and individuals above the cut-off score whose adaptation was inadequate.[3]

This concept of mental retardation provides two rich and complementary dimensions, measured intelligence and adaptive behavior. These two dimensions should not be considered independent of each other for they are positively correlated. However, the dual nature of the classification allows for the frequent discrepancies found in the level of performance in one or the other of the two dimensions.[4] Table 1 provides the names and levels of measured intelligence.

Adaptive behavior is best explained "as a composite of many aspects of behavior, and a function of a wide range of specific abilities and disabilities. Intellectual, affective, motivational, social and intellectual factors, sensory and motor factors all

TABLE 1

LEVELS OF MEASURED INTELLIGENCE

	Level	I.Q.
Borderline	1	83 - 68
Mild	2	67 - 52
Moderate	3	51 - 36
Severe	4	35 - 20
Profound	5	20

contribute to, and are a part of, total adaptation to the environment."[5] The names and levels of adaptive behavior are shown in Table 2.[6] Levels of adaptive behavior are derived from a composite of several sources, tests such as the Vineland Social Maturity Scale, clinical observations, and evaluation of the person's everyday behavior.

TABLE 2

LEVELS OF ADAPTIVE BEHAVIOR

	Level
Mild	1
Moderate	2
Severe	3
Profound	4

There are good reasons for the use of behavioral and measured intelligence classifications. First, this concept places emphasis on the present level of functioning of the individual. Second, it is more objectively oriented to therapy. Consequently, the therapist will be concerned with the individual's adaptation to his total environment, particularly with the way he copes with problems that arise. The music therapist's attention will be centered on the changes that occur in the retardate's behavior as he functions in the music activity, and on the individuals involved, rather than on the musical outcomes. Music activities appropriate to the developmental level of the retardate must be chosen. It is felt that the adaptive behavior approach stresses the fact that many mentally retarded persons would benefit from therapy. Consideration of behavior removes undue emphasis from intelligence test scores, which all too often are misleading.

Intelligence tests measure only certain aspects of behavior and thus are only a part of the total picture.

Values of Music for the Retarded

Whether one is a music therapist or a music teacher in special education, it is important to be aware of the potential of music with the retardate, to know how retardates respond to music, and to understand why it is an effective tool with them. Only with this knowledge and understanding can the best results be achieved. It is not magic that causes the retarded to respond so well to music. The retarded child responds to the same basic features of music as does the normal child. Music has certain unique characteristics which make it an ideal means to help in achieving appropriate behavioral changes.

One of the greatest problems of the retarded is in communication. They either have limited use of words or, particularly in the case of the severely retarded, they are nonverbal. Their problems in communication often make it difficult to use words to establish contact with them. The difficulties in verbalizing cause the retarded to have problems in interpersonal relationships. According to Michael-Smith, "contact is the first step in the amelioration of the problems in interpersonal relationships."[7] Music, because it is nonverbal, becomes a natural tool for establishing this desired contact.

Many persons believe it is impossible to carry on any type of therapy with the mentally retarded because of the problems of verbal communication. However, the interaction between patient and therapist is important in therapy, and this interaction may be achieved in nonverbal as well as verbal situations.[8] Traditional approaches are not always effective, and new approaches are needed.[9] Music, because it is nonverbal, may be the opening wedge with the mentally retarded. The lack of communicative ability in the retarded necessitates satisfactory, socially acceptable means of communicating feelings, which music may provide.

Group participation is essential to the life adjustment of retarded persons. They have few social contacts, and many of them function at an extremely inadequate level in interpersonal activities. Music is an excellent medium for group experiences, for it affords interaction at a nonverbal level, and it allows acceptable and successful nonthreatening participation at different levels of ability. Hutt and Gibby[10] stated that music provides the retarded with an opportunity for growth in a group situation. Michael-Smith and Gottsegans found music activities to be most effective in group therapy in their study with retardates. The purpose of their group therapy was:

> . . . psychic reintegration based on the overcoming of severe ego defect, due not only to basic retardation, but to years of overprotection and unconscious rejection by the parents. We attempted to utilize non-verbal body awareness with the purpose of making the child more sensitive, using activities involving sight, smell and touch . . . we attempted to encourage group relatedness through games and activities related to music, such as hand-clapping, stamping of feet and singing.[11]

The retardates in the experiment made successful "progress in the degree of self-expression, both verbal and kinesthetic; group relatedness developed, and parents reported increased initiative and self-expression in the home."[12] Gaston said "music offers an excellent milieu for the operation of group dynamics. Thus . . . music operates as an integrating and socializing agency by providing a situation for the adaptation of suitable behavior to group function . . ."[13]

The mentally retarded child needs to feel secure; music can provide this security through its inherent inner-order and structure. The same musical activity may be repeated many times and thus become predictable. The continuous basic beat and the repetition of the melodic structure sets up an expectancy which can help alleviate the retardate's fear of the unknown. Security also may be achieved by providing some structure to the music period itself, including repetition of familiar activities. Each new activity should contain some element of familiarity. If this is not done, the retardates may refuse to participate. Security can be enhanced through musical experience because of the positive feelings engendered. Gaston stated that music is closely related to the tender feelings and therefore "may effectively arouse that which is often at low ebb in patients. . . . This arousal of 'love' is vitally important and essential because it helps provide feelings of security . . ."[14]

Gratification, and consequent self-esteem, is a basic need of the mentally retarded. They are often aware of their deficiency and lack of accomplishment, and this awareness affects their sense of personal worth. They experience insufficient development of self-esteem because of their inability to cope with the demands of society. Music can provide experiences which bring about greater development of self-esteem. Music activity allows for different levels and different kinds of participation; the mentally retarded child is able to participate regardless of the severity of his retardation. The response may be quite simple, but he is taking part. He is contributing to the group, and thus, he may feel successful. A feeling of success brings about gratification and self-esteem.

Probably most important of all the values of music for the retarded is the aesthetic sensory experience. Gaston stated, "the significance of the aesthetic experience of music for the individual is, that without it, he would be less complete as a human being. Children, not only of our own culture, but of other cultures need music for their healthy and normal development."[15] He also said, ". . . the richer the sensory environment, the greater the development of the brain. Therefore, we understand why the sensory environment of the child must be rich."[16] If this is a need for the average child, it is a greater need for the retarded child.

In planning music activities, it is necessary for the therapist to know the developmental level of the retardate. A retardate may have a chronological age of 14, but his developmental level may be around three years. Research in the area of motor ability seems to indicate that the degree of motor retardation may be greater than often supposed.[17] In other words, the motor development of retardates might be considerably lower than their development in other areas. This emphasizes the need to consider each individual separately. Intelligence quotients and mental ages alone do not furnish sufficient information. The best approach is to consider each individual separately, basing the method of approach and music activity on his developmental level and specific learning disabilities. Hunt[18] found, in testing the responses of various types of retardates to meaningful auditory material, that the particular learning disability rather than the type of retardation was an indication of the response.

The selection of activities and songs that allow the retarded to participate, and are at the same time suited to their social development, is difficult. This difficulty is not so much in rhythm and listening activities, but in the selection of appropriate materials for singing. The song must have a simple melody and text with a certain amount of repetition, and, at the same time, must meet the retardate's interest and social level. Songs which contain repetitious syllables are generally an excellent choice, particularly for the severely retarded. Folk songs and many of the traditional songs meet these qualifications. The Los Angeles County manual for special training classes of the severely retarded suggests "children's familiarity with current music or songs that are part of our culture improves their chance for fitting into the community and environment in which they live."[19]

When introducing new musical activities to retardates, each step should be broken down into logical simple tasks. Hudson said:

> . . . below any level in I.Q. there is much that is, or can be made, concrete and simple enough to be within the individual's grasp . . . the difference between the average child and the mentally deficient is that the former can pick up much of what he learns informally, while the latter must be taught formally at every step of the way.
>
> Given time, with learning broken down into logical steps and simple and related parts, the severely retarded child is capable of grasping much . . .[20]

Kodman[21] believes that the sensory income may arrive at such a rapid rate that the retardate is unable to assimilate or decode the input. Thus, a type of sensory deprivation prevails. Spivack, in summarizing the findings in research of the perception of the mentally retarded child, reported that "as a group [they] are less efficient than those with normal intelligence in the ability to make fine discriminations between different points along a single stimulus dimension and less able to recognize or identify complex stimuli when exposed for brief intervals."[22] This indicates the course that must be taken in presenting music activities. The procedure must be simple and in logical steps with frequent repetition and a large number of supportive clues.

The retarded are capable of participating in many music experiences, including movement to music, rhythm activities, singing, listening, simple instrumental playing, and creativity. The responses may be vague at first, but gradually structure and concepts may be developed, depending upon abilities and needs. It is important, of course, that there be some successful experiences because this brings about a desire to experiment further. Each concept learned, no matter how small, is a significant gain for the retardate and helps to effect a change in his behavior.

Another problem in therapy is helping the mentally retarded to use their leisure time properly. They are prone to either "just sit around" or to pursue undesirable problem-causing activities. Social workers find that many of the families of the retarded, particularly of the severely retarded, are deteriorating because of the problems caused by the retarded individual. This suggests that in providing music experiences for the mentally retarded care must be taken to help them see how they might utilize music in their leisure time. It cannot be assumed they will use music in this way just because they have been exposed to it. This use has to be taught. The therapist or teacher should not only discuss with them how they might use music in their homes, but must carefully show them. This needs to be repeated again and again. Interest should be created by such experiences as field trips, demonstration of instruments, and talking about certain music events occurring in the community. A selection of some of the music activities must be made with the idea that the retarded will be able to use them in the community or home. Such activities may be simple forms of square dancing and listening. Because of short attention span and limited range of interest, a listening program is difficult, particularly for the severely retarded. An interest in listening can be developed through the use of short, simple, melodic pieces.

Music has many values for the retarded. It can benefit them in many ways. Music fulfills many of their needs in a most subtle, nonthreatening way. Perhaps most important, music activities can minimize the differences between the mentally retarded and their peers.

Reports of Practices

The rest of this section is devoted to description of various practices of music therapy. The first report has to do with the severely retarded, their limitations and potentials. Experimental research and clinical observations constitute the greater portion of this account. The second report, by Graham, is concerned with music therapy for the moderately retarded, in public school settings and in residential settings. Case studies are included. In the third report, Lathom discusses the function of music therapy in a psychiatrically oriented treatment center where it is used to assist in diagnosis, evaluation, and treatment. Here is shown its successful contribution to therapeutic aims for the rehabilitation of the mentally retarded. Cotten describes purposes and procedures for a tonette band in a residential hospital for retarded children. Bitcon's report is concerned with one particular activity, a drum corps, in which she describes how one music activity in a hospital becomes a treatment medium, meeting various needs of patients. Fraser describes how music, particularly rhythm, is used to achieve security, to stimulate speech, to control behavior, and to reinforce learning in certain academic areas. She explains how a music program might be used to achieve some therapeutic goals in an educational setting.

Music Therapy for the Severely Retarded

Betty Isern

The severely retarded are identified as those retardates who have intelligence quotients (IQ's) between 30 and 50 and who are rated at levels 3 and 4 according to the behavioral classification scale described in Tables 1 and 2 on page 137. These retardates usually require some type of continued custodial care. Baumgarten has said:

> . . . that most of them have some form of physical handicap, and that their mental development and speech and language abilities are distinctly limited. Although they are usually incapable of learning academic skills beyond a rote memorization basis, they do have capacity to learn to live cooperatively and to develop good personal habits, and under supervision, they have the potential to make a marginal adjustment socially and economically in a sheltered environment.[23]

This description is particularly applicable because of its positive approach; it is not limiting, and it recognizes that there are severely retarded individuals who will be able to make some social and economic adjustment.

Historically, these retardates were confined in institutions or restricted to their homes. Today, although many are still in institutions, more and more community services are being provided for them. Schools are establishing special classes, and communities are offering special day-care centers and sheltered workshops. Communities are now faced with the major problem of providing adequate facilities for severely retarded adults. Previously, most adult retardates were institutionalized, but today the emphasis is on community treatment. In consequence of these beneficial provisions, the severely retarded person may often live in his own home.

The main goal in working with the severely retarded is to help them to adjust to their environment by teaching and guiding them so that they are able to utilize more adequately the capacities they have, and thus the process of their full self-actualization is encouraged.[24] This suggests a program that provides basic skills in living such as self-help, social awareness, simple work tasks, and appropriate use of leisure time. Most severely retarded persons are prone to develop emotional problems in varying degrees, which in turn affect adversely their adjustment to society. If these individuals are to utilize in full their capacities, programs should be provided to alleviate their emotional problems. Thus, treatment for the mentally retarded has two distinct goals: (1) growth must be stimulated, and (2) emotional disturbances alleviated.[25] These two goals make necessary an integrated team approach to help the retardate in his process of full self-actualization.

Review of Research and Related Literature

Mentally retarded children are often confused about their physical body image; they have difficulty discriminating themselves from their environment. Lathom attempted to discover the effect of action songs on body concept.

> The study was based on the hypothesis that a child must have some organization of his physical appearance before he can begin to relate, in a very meaningful manner, to the people and objects around him; and that as his body-concept increased, he would begin to incorporate the concept of self in relation to space, time and physical objects/,/ and a growing social awareness would also occur.[26]

She believed that patients sent to music therapy for social interaction obviously needed therapy for reality orientation to their environment. Sixteen subjects were assigned to control and experimental groups of eight members each. They were from levels 1, 2, and 3 of the Adaptive Behavior Scale. In the experimental group, songs were used that required the subjects to move or to point to certain parts of their bodies. The test results were not statistically significant. However, it seemed that several uncontrolled variables may have affected the results. Lathom said:

> Many social changes seemed to occur as the Ss /subjects/ in the training groups seemed to get improved orientation to self in relation to objects and other people. These children would usually be prescribed to music therapy for increased social interaction. It might, therefore, seem that songs that deal with body orientation would be a useful place to start socialization for young patients, and music therapy can contribute to the milieu that is working for increased body orientation.[27]

Stockbine[28] also found music to be a socializing device, particularly for the severely retarded. Ludwig,[29] in a rehabilitation program with the hyperactive mentally retarded, discovered music to be an effective device in the socialization process. She felt their awareness and contact with other children improved through the music activities.

The severely retarded respond with greatest success to the element of rhythm in music. Certain aspects of the rhythmic response do not demand as much intellectualization as some other responses to music. Verbalization need not be involved. Murphy[30] studied rhythmic responses of 64 subjects divided into two groups. The average mental age of one group was three years, and of the other group was 11 months. The group with the lowest mental age engaged in rocking movements and:

> . . . appeared to represent a solitary, self-absorbed infantile level of social-emotional development as well as . . . a primitive gross motor and maturational level.
>
> . . . /The older group clapped and/ appeared to be capable of engaging in socialized group activity, specialized motor responses and in general represented an early childhood level of development in the intellectual area.[31]

This experiment reveals that there are varying levels of motor responses, but even those children with the lowest mental age respond in some way.

Tapping the basic beat is appropriate and needed in rhythmic activities, and security is provided by this repetitive structure. Rhythm also allows many different, acceptable responses, at all levels of difficulty, at the same time. Weigl[32] found rhythm to be an excellent medium for the retarded, because it is expression on the nonverbal level. She used the rhythmic approach extensively with the severely retarded. She started with the simplest movements such as handclapping or the mere nodding of the head and then slowly moved to more complicated responses such as marching. This same process, simple to more complicated, was followed when rhythm instruments were used. Progress was made because the children were able to respond to rhythm in some acceptable fashion, and this became an incentive for further endeavor. Weigl wrote that the rhythmic approach was valuable because:

> . . . (3) it facilitates coordination with others through the organizing, stimulative force of rhythm, (4) it gives them a chance for early success by eliminating tedious drill, finger exercises, and complicated harmonies, (5) it teaches them organization through the structure and genuine discipline inherent in musical form and rhythm, while still giving opportunity for "non-conformity" through individual improvisation and listening to others within the group; thereby (6) increasing their self-esteem, feeling of security, and the courage to go on trying and exploring.[33]

Hunt[34] used rhythm experiences to organize and unify a group.

Many therapists have found music to be an excellent tool in helping the retarded with speech problems, particularly delayed speech. Because there is a developmental scheme for the learning of speech, certain stages must be mastered before the next stage can be attained. In the first stage, the sounds are discrete and are made initially for kinesthetic enjoyment. Later, they are combined with consonants; this is the auditory stage. The next stage is imitating the sounds of others, which is the scholastic stage. The final stage is true speech, in which the child uses words independently and meaningfully.

Goda states that "this same sequence should be expected before a retarded child develops speech. But with the retarded child each stage should be expected later /in the child's development/."[35] Music offers the mentally retarded an opportunity to go through these developmental stages in a nonthreatening, socially acceptable way. They can become acquainted with musical sounds and imitation of these sounds, later they sing songs with nonsensical syllables, and finally, if possible, they sing isolated words, and then sentences. Music becomes a motivating factor in this type of therapy. Somerville believes that "one of the more effective ways to teach mentally retarded children to talk, children that have only expressed themselves by making murmuring noises, by lip movement and by pointing . . . is to introduce your words through music and rhythmical activities."[36]

Flanders[37] approached the problem through rhythmic activities and imitation of familiar sounds. Studying phonetics in this way was believed to be unobtrusive and painless. She was successful in introducing songs with motions and repetitive words, and songs including the retardate's own name. Loven[38] used rhythmic and choral activities to stimulate communication. She felt the best results were gained from musical action of a stimulating nature. Harbert[39] described the case of a seven-year-old boy who was diagnosed as mentally retarded, with no speech. The boy, after being in therapy one year, gradually began communicating, using one word and then adding more. This was achieved through the repeated singing of songs with nonsensical words and vowels accompanied with motions. Jordan,[40] in discussing programming for the severely mentally retarded, suggested listening to musical records and singing to encourage skills in communication.

Music is used very successfully as a help to learning in nonmusical areas. Isern[41] used 104 mentally retarded subjects with an average IQ of 47 to determine whether or not music might enhance learning and affect retention. The experiment was devised so that two learning situations were structured, one with music, and one without music. The identical material to be learned was presented in story and in song. The statistical results showed that a significantly larger number of items were recalled from the song situation than from the story situation. It was concluded that:

> Perhaps music improved the memory of mentally retarded children because it created or positively influenced the psychological conditions necessary at the time of original learning. Music being an added factor during the original learning period might have increased the vividness of the material, helped to organize and pattern the material

> through its rhythm, added to the emotional experience and enhanced the meaningfulness by helping to interpret the content of the material to be presented . . .[42]

Fraser[43] found music to be most useful in teaching the severely retarded to write. Music caught their attention and helped them to accept organization. By starting with gross bodily movements, the subjects could gradually move to refined movements such as finger motion. This activity helped the children learn orderly patterns. The listening span was increased, and some discipline was developed. After these preliminary activities, music was used when the children began their first writing exercises on the board.

The severely retarded often have physical problems. Their gait may be shuffling, coordination is usually inferior, and their posture is poor. In conditions of poor coordination, the learning experiences should include activities that help to improve the use of extremities, not only for better physical facility, but because poor use of the extremities often calls unwanted attention to the retarded. Rothstein[44] believes that muscular development can be improved, and movement to music and rhythm instruments should play an important role in this improvement.

Music therapy for the retarded is used with groups and with individuals. Often a retardate is incapable of tolerating a group experience and needs individual therapy prior to group participation. Denenholz[45] worked individually with ten severely retarded children. She used music as a tool to help alleviate certain emotional disturbances and to overcome particular learning problems. Her goal was also to help develop better speech through music. The speech of eight of the children improved. She also found that many of the emotional and learning problems were abated.

Wilson[46] saw a mongoloid girl daily for four weeks and found that, therapeutically, there were some slight gains. The pediatrician involved agreed with this. No doubt the gains might have been greater if the time spent in therapy had been longer. Music commanded attention, increased the attention span, evoked a mood change, and increased vocabulary to some extent. Instrumental music appeared to be more effective than vocal music.

Griffin, in describing a music therapy program at a state school, saw that "the role of music in the institution [was] a varied one."[47] Music was used therapeutically, purely recreationally, or as an adjunct to specific activities or projects. He suggested that much more structure is required when working with mentally retarded patients than with neuropsychiatric patients. He also found the listening classes, the most passive activity, to be excellent for those who could not tolerate or function in other groups. "The nature of this activity allows the patient the security of passivity with the opportunity for more active participation when he becomes psychologically able and motivated to do so."[48]

A psychiatrically oriented program with a team approach for the treatment of the mentally retarded was described by Loven.[49] The primary goal was to help the children adapt appropriately so that they could assume a useful role in proportion to their ability. The children were prescribed to individual and/or group therapy on the basis of their specific needs. "Prescriptions include specific attitudes and roles to be assumed /by the therapist/ in the treatment of each child . . ."[50] The usual music activities were found, in many instances, to meet successfully the predetermined goals, because:

> . . . the value of music for these cases depends on how it is used. For, as big a contribution as it makes, it is not music alone, nor any other tool alone working a magic phenomenon, but rather the predetermined goals set with it; the carefully planned and executed use of it by qualified persons, and the follow-up and support of its effect in the total child.[51]

Murphy,[52] a psychologist, reported a somewhat different use of music in the hospital setting. She believed that a music therapy program might be a partial solution for the emotional problems of the severely retarded. Music was provided for 74 percent of the population that was not participating in a formal training program. The average intelligence quotient was about 20 and the average mental age was two years, two months. Music was provided on the wards once a week for seven months. The instruments were a saxophone and an amplified guitar. There was no attempt made toward directed group activities. According to Murphy, these musical presentations on a ward for emotionally disturbed and hyperactive adolescent boys resulted in these changes:

> . . . self initiated group participation, voluntary self discipline, development of desirable interpersonal attitudes, efforts at pronunciation of the words of the songs by some, improved pronunciation of the words of the songs by others, vocabulary development as more words and phrases of familiar songs are learned, development of gross motor coordination, and enjoyment of music as a source of recreation.[53]

Similar music programs were organized in hospital cottages. "The progressive learning observed in the cottages . . . suggests the possibility of rather dramatic hold-over effects . . ."[54] In the cottage with the smaller, hyperactive boys, it was noted that there was less bed wetting and soiling. The observable results noted from this study indicate the rather striking influence of music on the mentally retarded. Many severely retarded persons may not be able to participate actively, but behavior changes occur, nevertheless.

Somewhat the same technique was used by Alvin.[55] In her experiment with severely retarded children, the concert approach was used. She played the cello, explained the instrument, and showed how to play it. Twenty-four children, ages 6 to 16, with IQ's from 22 to 50, were the subjects in this experiment. Observational reports were made by the children's teacher and by Alvin. On the basis of these reports, the following conclusions were drawn. Music proved to be a means of communication with each of the children. Responses to music included increased desirable physical activity, more verbalization, and increased signs of interest, satisfaction, and pleasure. There was some development of sense perception and substantial increase in attention span. Social integration took place.[56]

The need of a bridge, so to speak, between home and community, or institution and community, is growing rapidly. For this reason, day-care centers are being established in many areas. Music therapy has an important role in these centers. Perhaps the most important role music plays in this type of situation is helping children and adults to learn various music activities so they may use them in their leisure time. Harbert[57] showed the effectiveness of music in a similar role. A music clinic which included many severely retarded children was held once a week in the winter and three days a week in the summer. She found this type of situation to be particularly beneficial in achieving socialization, causing feelings of well-being and joy, and providing experiences in self-expression.

Isern[58] observed music activities being used in an adult center for the severely retarded. These people either had not attended classes in special education, or had attended, but not benefited from them. They were not capable of working in a sheltered workshop. It was believed, however, that some skills could be learned, and behavior changes might occur through musical activities. These adults were very retarded, and many had poor use of their extremities. Music was provided for this group twice a week for nine months. The goals for the music experiences were to stimulate communication, participation, socialization, and interest in music activities that might carry over to home and community. Particular emphasis was placed on listening, simple square dancing, adult rhythm instruments, and singing. The listening program consisted at first of live performance. The (student) music therapist played short melodic pieces on the piano and cello. Occasionally, other performers were brought in. It was thought that, to begin with, live performers would better hold the patients' attention. During the first listening experiences, the therapist pointed out certain aspects of the music that should be listened to, such as melody or rhythm. Listening to recorded music was introduced later, using music which had been heard previously in live performance. It was noted that *attention span increased when listening to recorded music, after listening to live performances*.

The square dancing was successful, although the process of teaching the patterns was slow and tedious. After nine months, they could do simple squares. There were some who would participate only in this activity. One patient was observed who spent most of his time hallucinating. However, during the square dancing, he appeared to be in contact because he participated and executed all the necessary movements. It was noted that his hallucinations did not start immediately after the dancing, and the longer he danced, the longer the period before the hallucinations began. Other personnel at the center believed that the music activity achieved desired goals and considered it to be a desirable and needed facet of their program.

This review of literature and practice does not contain reports of the use of music in special education. The goals of music in special education are similar to those described. However, many books on training the severely mentally retarded and curriculum outlines of various schools indicate a wide use of music in programs for the retarded. Many of the programs use music not only for socialization and communication, but also to teach other concepts needed for daily living.

The music therapist has much to offer to special education and should be included on the staff of such a department. The teacher in special education cannot be expected to be skilled in all of the many activities needed in a classroom. Perhaps, in view of this, it would be of benefit to use the services of a music therapist in classes for the retarded.

Music therapists have been trained for this and know how to use music to achieve most of the desired goals of such training classes.

Music Therapy for the Moderately Retarded

Richard M. Graham

Many moderately retarded persons are able to live in the community, while others, needing more help, reside in institutions. Retarded children who are institutionalized usually have more severe personality disorders than do children who reside in the community, although the amounts of their measured mental retardation may be the same. The basic goals of music therapy for the moderately retarded, whether in the community or in special institutions, are basically the same: to help the children establish better interpersonal relationships, and to help them develop self-esteem. In accomplishing these goals, music therapy sometimes enables these children to perform more adequately those tasks that measure their intelligence and/or to achieve higher adaptive behavior levels.

There is evidence that intelligence and musical ability, when measures of musical ability are based on complex musical tasks, are closely related.[59,60,61,62] Nevertheless, low measured intelligence does not preclude effective music therapy for the mentally retarded, for music therapy does not depend upon the achievement of professional levels of performance in order to reach its goals. Frequently, a mentally retarded person has achieved more in music therapy than had been predicted for him in his original diagnosis. In considering such cases of unexpected achievement, Jordan said "different levels of performance exist in children at different times. This applies to all children, normal and retarded. In the case of the retarded we may say that situational factors can produce a better picture than anticipated even when the child is truly functioning below average at diagnosis."[63] Such unanticipated changes should not be regarded as "cures." ". . . The change is one of amelioration, of improvement, rather than of restoration to normality (cure)."[64]

Music Therapy in Public School Settings

Moderately retarded children who live in the community are often students in the public schools. There has been some disagreement as to whether these students benefit more when placed in regular school classes or in special classrooms. The results of several studies[65,66,67,68,69,70,71] favor regular class placement of the high-level retardate if the goal is academic achievement. In the achievement of social and personal adjustment, areas which concern the music therapist in special education, the same studies indicate that placement in special classes may be superior to placement in regular classes.

Miller,[72] in a junior high school class for mentally retarded children, developed a music program to provide for individual initiative, leadership, and general improvement in capacity for musical self-expression. The use of familiar songs with repetitive words and folk dances based upon simple steps allowed the children to improve speech, improve poise, develop a sense of rhythm, and exercise leadership.

Carey,[73] working with a special class, found that mentally retarded children progressed at the same rate in music as they did in academic subjects. It was found that somber songs tended to result in student disinterest, and highly stimulating songs tended to cause nervous reaction. Rhythmic activities proved useful in developing self-expression. Weigl[74] described procedures used in a school for mentally retarded children. In an evaluation of adjustment and attitude changes effected by these procedures, it was found that 10 percent of the students showed no change, 20 percent showed some change, and 70 percent showed improvement which carried over to the home and school.

These examples of music with the mentally retarded reveal the "special class" philosophy. There was no pressure upon the children to improve their skills or behaviors so that they might some day participate with "normals" in performing groups. A mentally retarded child with normal musical performance ability would be exceptional. Stevens and Heber said "the information obtained from survey and case-study material indicates that competencies in art and music are related largely to the mental development of the child. The mentally retarded are slower to learn and remain longer at each stage."[75]

The point of view that music therapy for the mentally retarded should be a medium for integration into the total school community is held by some. These individuals view the instrumental ensemble, for example, as a democratic, cooperative society in which each person does that which he can do best. "In music do not give him (the exceptional child) a separate program--if possible bring him into the musical experiences of normal children, where the exceptional child can cease to be exceptional . . ."[76]

Music Therapy in Residential Settings

The institutionalized, mentally retarded child usually has some personality disorder which may be the primary cause of his institutionalization. This is particularly true of high-level retardates. Typically, the institutionalized child of high-level mental retardation may be described as being socially and culturally deprived, and as having personality disorders which are complicated by subnormal intellectual functioning. One aspect of cultural deprivation normally suffered by mentally retarded children is music deprivation. The harsh circumstances that are frequently present in the pre-institutional life of the high-level retardate often preclude a normal introduction to, and growth in, the areas of music. Such a child has only limited opportunities to learn to express himself on a musical instrument. The direct expression of sheer joy through singing--in which normal preschool age children generally participate--may not be encouraged or tolerated in a home characterized by "poor health, improper diet, frequent moving, and noisy TV . . ."[77] Except for those exposures to TV and radio, the early musical life of the institutionalized, mentally retarded child is as much characterized by deprivation as are the other aspects of his life.

The child's previous musical background influences the way he reacts in an institutional music setting. Thus, the music therapist takes this background into consideration when planning and carrying out treatment. A study by Graham revealed a significant relationship between amount of music deprivation experienced by institutionalized, mentally retarded children and their need to perform, or express themselves, musically. The evidence from this study revealed that the greater the music deprivation, the greater his desire to pursue a musical task which was designed for his abilities.[78]

A study by Murphy[79] suggested that social and emotional levels of development may be indicated by the rhythmic responses that middle- and low-grade defectives are capable of making. An attempt was made to elicit active participation from two groups of mentally retarded subjects--one group of subjects who expressed rhythm with spontaneous rocking movements and one group of subjects who responded to musical rhythms with hand-clapping. Murphy reported that those who engaged in hand-clapping would engage in socialized group activity and socialized motor responses, while the other group responded on a lower level.

The problem of "overadjustment" to the music activities of residential institutions was discussed earlier. Sheerenberger[80] described an institutional music program which would not only meet the needs of the present, but orient them toward community living. This program was developed around singing and rhythm activities. Songs were selected on the basis of interest, enjoyment, and curriculum correlation. Younger children concentrated on rhythm activities which were used to assist in developing finer coordination between the visual, auditory, and motor processes. The older children participated in folk dancing and other rhythmic activities.

For those retardates who live in an institution, there is a practical problem of adjusting to the norms of musical behavior peculiar to that institution. To be a "good" music therapy patient in an institution requires that the retarded child derive satisfaction from his institutional music experiences and see the "outside" community music activities as relatively less urgent and rewarding. On occasions, a local church choir or similar community music group is used as an integrative social group or part of the "halfway" program for newly released patients. Far too often on these occasions, the institutions find that they have taught the newly released outpatient to function well only in supportive, structured, institutional music ensembles. In relation to this issue, Sarason's[81] statement regarding institutional living may be paraphrased to state that there seems to be a choice of goals--either the welfare of the child or the smooth-running institutional music program.

Case Histories

The following case histories demonstrate how some of the problems of moderate mental retardation may be alleviated through therapeutic situations which make use of musical performance.

Case 1. Ten children (aged 7 to 10) of low measured intelligence were students in a special "ungraded" room of a public school in a large city. Each child was taught to perform on certain rhythm (percussion) instruments. After each child had developed at least a minimal technique, he was integrated into a group which performed alternately as a rhythm band and as a "free and unstructured music-making group." The rhythm band was a learning situation in which students were taught to recognize and respond to rhythmic accents in groups of twos and threes. The teacher would play the piano, and the group, upon command, would imitate the beat or rhythmic pattern. During the free period, the students were encouraged to make up rhythmic patterns. These patterns were used as rhythmic backgrounds for piano improvisations by the teacher. The improvisation on the rhythmic idea of a particular student was entitled with the student's name.

The music therapy session was the only purposely designed group activity experienced by these students. The remainder of the day was devoted to the special class curriculum which consisted of reading, arithmetic, writing, and speech. It was the opinion of the special class teacher, the school principal, and the music supervisor that the students were helped by the music therapy sessions, because the students accepted each other better during the music therapy session than at any other time during the school day.

Case 2. T, a ten-year-old boy whose Revised Stanford-Binet Test IQ was 68, was assigned to the special class of a public school. T had started kindergarten at the age of six and had been promoted regularly until he reached the fourth grade. His language skills were underdeveloped, and his motor skills appeared to be restricted. When inquiry was made as to his major interests, he mentioned music. Discussions with his former teachers, however, indicated that T did not sing and would not, or could not, participate in daily rhythm activities. Welfare reports indicated that the home was characterized by considerable cultural deprivation.

The teacher's first concern with T was in the area of language development. Because he had stated an interest in music, the teacher asked him to sing a song. T was very reluctant to sing and would only tell her the names of some of his favorite songs. He was induced to sing after the second day in the special class. His style of singing was "country-western." The singing voice was nasal, the diction, enunciation, and pronunciation were patterned after a commercial "hillbilly" performer, and the intonation was poor.

The teacher realized that, for T, singing offered the best wav to begin the development of receptive and expressive language skills. The problem of his "hillbilly" style of singing was discussed with a local music teacher. The teacher had to decide whether to encourage what was considered poor singing in order to foster language development, or to develop the singing and leave language development to some means that was less attractive to T. Because T tended to be withdrawn and hostile in activities except when he was singing for the group, the teacher decided to use his interest in singing for language development activities.

Most of the songs that he knew had lyrics which were unsuitable for use in the classroom. He was permitted to sing these songs on occasion, however, simply to allow self-expression. One song, "Detour, There's a Muddy Road Ahead," was used to develop receptive language skills. When he sang the words to the class, all students were required to pay strict attention. Afterwards, there was a general discussion of the meaning of the word "detour." Later, "detour sign" was considered, and this led into a general discussion of traffic signs. The class and teacher altered the lyrics of some of the songs that T knew, or they wrote new verses for them. These songs were used in rhythm games and to help all students learn to follow simple directions presented in musical context.

The skills developed during three weeks of this activity were essentially receptive in nature. Receptive language skills can provide a basis for developing expressive language skills. The gradual development of these receptive skills, coupled with T's desire and apparent need to sing, resulted in a greater ability to express himself. After eight weeks of these activities, he was able to participate in formal articulation drills and new games, and could recite simple poems. His attitude toward his peers and toward his teacher was much more acceptable to those around him. After 16 weeks, a retest on an equivalent form of the Stanford-Binet Test of Intelligence showed definitely higher performance than the original test had shown. It was the teacher's opinion that T's singing had improved to some degree. She had noticed no detrimental effect of his singing style on the singing of the remainder of the class.

Case 3. M was institutionalized in a state school for delinquent girls. She had a medical diagnosis of hypothalamic epilepsy and a moderately low level of intelligence. When committed, M was 13 years of age and had been attending the fifth grade of her local elementary school. Her fifth grade teacher described M as "clumsy, unsociable, undisciplined, and with a poor background." Much was said of her "violent temper" and how "easily upset" she was. In referring to the several sexual incidents which led to her institutionalization, a psychiatrist mentioned that her "low intelligence made her easy prey for unscrupulous males," and that organic factors were of lesser importance in her overall adjustment problem.

Therapy consisted of individual sessions with a psychiatrist and three sessions a week with a music therapist. The goal of the therapy was for better social and personal development and for an "enriched experiential background." Because M had shown interest in the piano and proved to have some facility at playing, the treatment plan for the music therapist was, at first, to allow her some "isolated activity" in the form of piano playing or practice--whichever she desired. Later, some "parallel musical experiences," directly or indirectly involving the music therapist, replaced the isolated activities. It was hoped that M would eventually be able to profit from "structured group music activities."

The first five meetings with the music therapist were devoted to making M comfortable in the music therapy area. During these meetings, she was allowed to play the piano as much as she desired. After these five sessions, the music therapist asked whether she might play duets with M. M's response was that she "didn't want no piano lessons." The music therapist assured her that she was not going to give her any lessons and that she only wanted to have a little fun at the piano.

The four-hand piano performances that began after five sessions in which M was allowed to perform alone constituted the "parallel musical experiences." During this time, the music therapist made suggestions to M concerning her behavior, both at the keyboard and away from it. She was receptive to some of these suggestions, but appeared to ignore others. It was noted in her sessions with the psychiatrist, however, that the music therapist was becoming more and more a highly regarded person in M's life. On one occasion, M stated to the psychiatrist that she would like to become a music therapist someday.

The psychiatrist then instructed the music therapist to take more direct measures toward changing the patient's behavior. M was assigned to the music therapy department as a patient assistant. She accompanied the music therapist to certain cottages where she would pass out song materials and collect them, as well as assist the therapist in other ways. She was put on a regular routine of piano practice and was expected to make a certain amount of progress from lesson to lesson. (She no longer objected to piano "lessons.") Certain aspects of her conversation, regarding boys and sex, were no longer tolerated in the music therapy sessions. She was told that such things should be told to her doctor, but in the music department the major interest had to be learning to play the piano. Other negative aspects of her behavior were discouraged, while her progress on the piano was praised. As she became more proficient in her work assignment, she was given more and more responsibility. After six months, she was appointed assistant conductor of a church choir. It was her assignment to see that all choir girls were in their seats for Wednesday evening rehearsals and to conduct them in one or two familiar hymns before the actual rehearsal began. She was readily accepted by the choir, and the experience appeared to be very gratifying.

The assignment as assistant choir conductor began the period of "structured group music activities." M demonstrated considerable improvement in her social and personal development, in her work habits, and in her ability to enjoy herself in certain group recreational activities. A refinement in motor activity was observed in her increased proficiency at the piano and during her conducting sessions.

A psychiatric reevaluation, after some seven months of commitment, resulted in the reclassification of her level of mental retardation. In the opinions of clinicians who tested and retested M, her level of adaptive behavior had been raised since her admission to the institution from what was originally considered "moderate" to a "mild" level of retardation.

Future therapy for M was planned to include increased exposure to heterosexual groups. She was to be included in a group of girls who would be invited to certain youth mixers and other social events for teenagers in a nearby metropolitan area. Plans were made for her to attend church in the city and to sing in the church choir. Her psychiatrist and her music therapist believed that she would be able to carry over much that she had learned in music therapy choir meetings, and that she would be able to interact with the church choir members in an appropriate manner.

The Use of Music Therapy with Retarded Patients

Wanda Lathom

Mental retardation is defined by the American Association on Mental Deficiency (AAMD) as "subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior."[82] A definition in terms of the retarded individual's social role is offered by Leland, who states:

> When we interpret the condition in terms of the total needs of the community, and we find that the subnormal individual is continually defined in terms of failure to perform, failure to achieve and failure to be absorbed . . . we find that we have to think in terms of disciplines other than just psychological and educational.[83]

It is in this context that music therapy may be most valuable. The mentally deficient individual may become aware of himself and his environment through the use of a sensory stimulus which eliminates the necessity for verbal or social interaction. Through his reactions to the therapy, the child communicates his limitations and his level of functioning. Through this therapy, the child may attain a higher level of adaptation to his environment, a greater understanding of himself, and a greater ability to relate to other people.

When a child first enters an institution for the retarded, he may be confused by many factors in his new environment. The change from family living to an institutional schedule, the number of unfamiliar people, and the need for orientation to the physical setting all contribute to the patient's initial confusion. In this early stage of the child's development, music therapy may be perceived as a supportive and relatively nonthreatening facet of the hospital environment. To the new patient, a guitar, autoharp, or some other instrument on which he may focus his attention may be less threatening than a verbal relationship. As he observes the therapist at work with a group of his peers, he may find that the persons who sing and play with his group are not frightening. Thus, the music therapist may be among the first of the staff with whom the patient is able to initiate a relationship.

It is important that the therapist be skilled in observing the patient and in objectively reporting what he observes. If the child is scheduled for regular periods of therapy, the therapist will be able to observe him in a variety of situations. As he performs on a number of instruments, his use of abstract symbols may be observed. For example, is he able to play the chord organ by matching the letters on the organ with those in the book? Does he do this in a logical, orderly manner which indicates an understanding of the relationships of letters, or does he have to search for each letter? If he sees a group of identical letters, does he perceive them as a group, or does he search for each one separately? Does he use fingering logically, or does he search for the notes with one finger? Is he matching the shapes of letters, or does he associate a word with the symbol? These are all indications of the patient's use of abstract symbols and of his level of functioning. The same procedure of identifying abstract symbols may be repeated with numbers on the Melodica, colored bells, or other musical instruments to which symbols can be attached. The information obtained from the procedure may be of later use, for it will indicate whether the patient uses abstract symbols well enough to learn musical notation without excessive frustration.

The child's organization of rhythm patterns may also be tested. If his attention span is very short, he may be unable to repeat short cadences or to maintain a basic beat for the duration of a song. However, he may be quite attentive and may have the ability to organize long, difficult cadences and to repeat them accurately. This, too, shows the child's level of functioning and may give some indication of which music activities would be most beneficial to him.

The therapy program may be modified according to the manner in which the patient uses objects. In The Aggressive Child, Redl[84] notes that some objects indicate certain actions--a chair is perceived as an object on which to sit, and a pencil is an object with which to write. The chair and the pencil are used so commonly for these purposes that most children do not need to be told how to use them--they learn by imitation. There may be a number of reasons why a child does not use common objects correctly. If a drum is placed in front of a little boy and he does not strike it, the therapist must try to determine why. The patient may be from a culturally deprived home where he failed to learn that a drum was an object that makes a sound, or he may be afraid that the therapist will scold him for making noise, or he may fear that his peers will laugh at him if his performance is not good. He also may consider the striking of a drum an aggressive act, and he may fear loss of control of his own aggressive impulses. As the child is observed in similar situations, a skilled therapist may be able to determine the reason for his reaction to a particular object, and this knowledge may be useful when the time comes to decide what treatment he needs.

Circle games, line games, and action songs are useful for young or regressed patients. During these games, the therapist can determine whether the patient is able to imitate other persons, whether he is comfortable enough with the group to suggest new motions, and whether he has a fund of ideas from which to initiate new motions. Indications of his spatial and body orientations also can be noted as he takes part in forming a circle or a line and as he performs actions that require him to move a particular part of his body. The child who must have someone take his hands and lead him around the circle seems to be on a different adaptive level than one who is able to maintain this formation on his own.

It is important to observe how the patient reacts to frustrating situations and the defenses he uses when he is afraid he will not be successful. Many patients project their failure on the therapist, the instrument, or their peers. They say, "you gave me the hardest one to blow," or "this one is broken--I could play if you gave me another one," or "I could play if he would be quiet." Some patients refuse to try if they suspect that the task will not be easy, while others become angry and refuse to give up when they have to put the instrument away before they have been able to produce a sound. Some withdraw and return to an activity in which they were successful.

The therapist attempts to determine which interpersonal relationships are least threatening. Is the child more comfortable in a one-to-one relationship with the therapist, or in a group? Does he relate differently to a male therapist than he does to a female therapist? How does he react when with patients who are older or younger than he? In what manner does he try to establish relationships with his peers? All of these questions must be considered in designing an effective treatment program.

When the retarded patient is referred to music therapy for further treatment, the referrals often indicate one or more of five general aims. These are (1) socialization,

(2) strengthening of defenses, (3) intrusion on fantasy, (4) stimulation, and (5) gratification.

Socialization

There seem to be three levels at which assistance in establishing social relationships is particularly needed by retarded children.

Pre-group Socialization. Very young and severely regressed patients seem to prefer object relationships to interpersonal relationships. They are willing to play with simple rhythm instruments, and anything else small enough to handle, with which they can make noise. Most of these patients have very short attention spans, and many are hyperactive. They usually can begin some social interaction in therapy sessions in which they participate with their peers, but their main focus is still on objects. They usually need increased orientation to self, space, and time before they interact. Symonds comments on the importance of a realistic self-concept. "The self is the most real thing in our experience and is the frame of reference with which a person perceives, conceives, and evaluates the world around him and toward which he reacts."[85] If the child is unsure of the limits of his own body boundaries, he cannot begin anything as complex as social interaction. Fisher and Cleveland state that "the more definite an individual's body image boundaries, the greater his capacity to enter into intimate expressive relationships."[86] However, as he begins some interaction, the manner in which the child perceives himself is modified. Schilder notes that "body image is to a considerable degree molded by our interactions with others and to the extent that these interactions are faulty the body image will be inadequately developed."[87]

Action games which allow everyone to do similar things and which stress imitation can be performed with a minimum amount of interaction in the group. Rhythm band activities and songs that allow patients to reenact events that have occurred in their immediate environment can also be used. The therapist can structure games, dances, songs, and rhythm band activities that require increased consideration for others in the group, and call attention to the physical structure of the body. Machover seems to agree when she states that "personality does not develop in a vacuum, but through the movement, feeling, and thinking of a specific body."[88] Ayres notes:

> When a child does not learn through the normal course of development to synthesize impulses into a body scheme, training procedures are based on increasing the flow of sensory impulses, developing a conscious knowledge of the construction and basic movements of the body, and associating the sensation and conscious knowledge through simple gross meaningful motor tasks.[89]

The hyperactive child with a very short attention span may participate in short action songs or games that provide an outlet for his physical need to move. Since these songs are short, the child may withdraw between songs but be brought into group activity for increasing lengths of time.

Much of the therapy with pre-group children is directed toward preparation for special education classes. If the child is not yet able to interact, he will not be able to tolerate the group activities within the classroom or to pay attention long enough to learn. The child who is still at a pre-group level usually lacks the variety of first-hand experiences that are necessary for beginning special education activities.

> The classroom teacher carefully notes the child's stages of development in physical condition, social adjustment, emotional stability, fund of ideas, ability to think, command of the English language, work habits, sensory ability, motor habits, and his interest in learning to read. At least nine of these ten areas must be developed satisfactorily before the child can be considered mature enough to learn to read successfully. If two or more areas have not emerged, then the classroom teacher tries to provide an extensive program of first-hand experiences suited to the interests and level of the immature learner.[90]

Group Level Socialization. Another type of therapy for socialization is prescribed for patients who have learned to interact with others, but who do so in an anti-social manner. This includes children who are physically and verbally abusive to their peers, as well as very shy, insecure children who lack a repertoire of ways in which to "reach out" to other people and establish new relationships. Music activity can be structured to provide a variety of interpersonal relationships and social situations. ". . . music operates as an integrating and socializing agency by providing a situation for the adaptation of suitable behavior to group function. It is a nonthreatening, intimate, enjoyable, and expressive activity blessed with social acceptance."[91] The music activity can be so appealing that patients modify their inappropriate social responses in order to be included and to cooperate in the production of the music.

> If anyone would question the social value of music, it should be enough to point out that it is invariably used when any gathering or organization desires to create a community of feeling, or harmony and congeniality of spirit. . . . Music can help to shelve old prejudices, jealousies, and feuds, and it can merge the individual into the

> community which should be the ideal of all schemes for social recreation--a medium by which the people can better understand each other.[92]

The aggressive child and the fearful child need a predictable environment. It is often helpful to establish a routine structure for the therapy session. For example, the session may always start with the children entering the room and sitting in chairs around the piano. The first third of the session may be used for singing, the second third for active games or dances, and the last third for playing of instruments. Although the music used in each section of the period may be varied, the same predictable structure can be followed in each music session.

> There may be more emphasis on adjustment within a treatment program. Children, it is held, may be frightened by too much freedom, and lack of patterning in daily living may be confusing. In an orderly environment, the child's anxieties may be lessened and his potentialities for growth and adjustment may be encouraged.[93]

Although the normal child, who is able to establish limits for himself that are in keeping with the mores of his community, can profit from a permissive environment, the aggressive or fearful child seems to need a firmly structured environment with limits that are clearly defined. Rodman states:

> Insistence on behavior within established limits becomes central in the treatment of a child whose problem is expressed by aggressive behavior. The goal, simply stated, is to provide such a child with an environment in which there is a degree of consistency that will enable him to internalize an orderly atmosphere and approach the problems of his own life in a calm mood, a mood that will enable him to come closer to realizing his capabilities. . . . A treatment program aims to restore to the community a child who is able to utilize his capabilities within certain internalized limits; in other words, we hope to help him make his community's judgment of appropriate behavior his own.[94]

Adolescent Socialization. Retarded adolescents, in many instances, need therapy for social interaction. During adolescence, the girls assume more feminine behavior, and the boys often need a strong male figure with whom to identify and activities that are obviously masculine. Both the boys and girls may be afraid to initiate relationships with the opposite sex and need a structured setting in which to try a variety of means of establishing relationships. Retarded adolescents, as well as normal adolescents, often have difficulty in handling their emotions. Their reactions are sometimes extreme--they laugh too loudly, cry too easily, and sometimes feel rejected as the result of an unimportant incident.

The ability to gain control of feelings and to initiate and maintain appropriate relationships is an important aspect of the adolescent's adaptive behavior. All adolescents test their more mature roles. Testing frequently involves questioning or challenging the persons whom they perceive as authority figures. Linnell[95] notes that relationship with authority is one of the adolescent's chief concerns. If this relationship with the therapist can be maintained in a supportive structure in which the patient is not rejected, more mature behavior may be the result. Music groups may also be structured to give the patient an opportunity for more social and individual responsibilities, other aspects of adaptive behavior. Leland, in referring to the AAMD definition of retardation, states:

> The third aspect of our definition of mental retardation is also associated with "impairment in adaptive behavior." This is described as relating to independent functioning, personal responsibility, and social responsibility. Since every child who is able should be given every opportunity to remain in his own home and be aided in learning to live a happy, useful life, the problem of adaptation in children becomes the responsibility of many disciplines.[96]

The retarded patient who is not institutionalized until adolescence usually has experienced failure in many situations, and the defenses that he has adopted to handle his disappointment and frustration may not be beneficial.

Adolescents are often very self-conscious; therefore, they feel verbal interaction to be a threat. However, music activities can be nonverbal. Guthrie et al. note:

> Since retardates have a very limited ability to say how they feel and what they think, their reports do not give us sufficient material to identify the patterns of attitudes which they have developed toward themselves and toward others. We must infer from other sources of information their characteristic conflict areas and their perceptions of, and solutions for, these difficulties.[97]

Music can fill the void in conversational lapses. If two people are listening to music, it is appropriate for them to stop talking and listen to the song. This can relieve some of the psychological stress that the adolescent may feel. Since the musical activity can be structured to allow the main focus to be on the activity rather than on interpersonal relationships, it may be a relatively nonthreatening means of working on more appropriate relationships and may also allow the therapist to observe the patient's nonverbal responses to social situations. Imitation of social roles can be encouraged by rewarding appropriate behavior.

Strengthening of Defenses

Music therapy is also prescribed for patients who are having difficulty with impulse control. They seem to benefit from tightly structured activities which are gratifying to them. "The fact that adolescents of the acting out type do better in an atmosphere of restrictions rather than of unlimited freedom is an indisputable empirical finding."[98] The retarded patient, who is very impulsive and does not think of the eventual consequences of his actions, may be led easily into delinquent activity by his more intelligent peers. Leventhal conducted a study on the "Inner Control Deficiencies in Runaway Children." He concluded that "runaways seem to have a generalized experience of little or no control in relation to both internal and environmental events. They give more indications of discharge-type behavior, of deficient regulatory mechanisms, and of a 'helpless' self-image."[99]

One example of a highly structured group is a drum corps. Within our society, marching and playing a field drum or a bass drum usually is perceived as a masculine activity. It is, therefore, appealing to some adolescent boys who are trying to express their masculine identification. Since a drum corps marches in step and formation and plays a repetitive cadence, the structure is established to the fraction of a second. As it marches on the hospital grounds, other people stop to watch, and soon the members may have pride in their ability as a group. At this point, there may be considerable peer pressure for members to conform in order to give the group a uniform appearance. The therapist has a good opportunity here to stress grooming and posture. Because the activity is tightly structured, close relationships are not necessary; therefore, the patient may be allowed a long time to form a relationship. It seems beneficial to have two therapists with this group, since they can maintain tighter structure. It is possible for one therapist to remove a disturbed patient from the group to work with him individually.

The patient who is struggling to maintain impulse control may experience considerable anxiety. "The cliche is often repeated that fear is a psychic state produced by a set of objective events that signify danger; anxiety is a similar psychic state, but the precipitating events are absent or 'unconscious.'"[100] A physically active music session may relieve some of the physical tension that has resulted from anxiety. If at the end of the session the patient is physically tired, but relaxed, he will have better control.

A modern dance group may offer many of the same goals. In our culture, dancing is often considered an effeminate activity, even though it requires considerable physical dexterity and control. The activity can be structured as tightly as the drum corps, but it also can be a creative experience, as the patient is free to participate in expressive ways.

Intrusion on Fantasy

A retarded patient also can be severely depressed or schizophrenic. His limited intelligence may make it difficult for him to cope with reality, particularly if he is acutely aware of his limitations. The defenses that he uses to handle his frustration may include acting out behavior and severe withdrawal. The fact that an individual may be functioning on a retarded level does not always indicate that the problem was initially the result of brain damage. It may be the result of emotional disturbance or lack of sensory stimulation. This has been discussed by Leland:

> We seem to be dealing with various kinds of combinations of emotionally disturbed, brain damaged, retarded individuals, the emotional disturbance either growing out, or existing alongside, of the retarded condition. There are some instances where the emotional disturbance may directly cause retardation, but in those instances there also seems to be some evidence of brain damage. This latter is related to lack of brain functioning. Thus, if the retardation is caused by emotional disturbance, the brain is kept at a semi-nonfunctioning level, as for an extended period of time, regardless of whether or not it was damaged when the emotional disturbances started. By the time we have been able to correct the situation, the brain will be damaged.[101]

Music therapy is often prescribed as an intrusive means of treating the withdrawn, retarded patient. In finding reality-oriented activities in which the patient can be successful, the therapist may be able to establish a relationship with the patient. "Children live in a world of people, and much of their development centers around their relations with people. Since music is largely a social art, it is quite naturally inseparable from social living, its opportunities, its challenge, and its problems."[102] The patient may be able to begin with very concrete reality (e.g., matching colors or letters to play a melody, or keeping time to music with simple instruments) and progress to an acceptance of the reality of his feelings and behavior. Because music is an expressive medium, it can lead to discussions of the patient's affective reality. Music which encourages motor participation can be useful because it intrudes on the patient's fantasy life. Music listening, however, might allow the patient to escape in his fantasies.

As the therapist intrudes, the entire treatment team should be aware of the patient's need to test new reality functions. In the initial stage of his testing, much of his behavior may be anti-social; therefore, the team should be supportive in encouraging the testing, but inappropriate behavior also should be called to the patient's attention, and more appropriate behavior should be suggested. However, the acting out may be looked upon as progress, since it is a beginning of reality-testing. Because music is structured, it can lead to more organized behavior. Music that has a very apparent, repetitious form seems compelling in maintaining the attention and participation of the patient who needs intrusion.

Stimulation

A large number of retarded children are from culturally deprived homes. These children have not received enough stimulation to provide a basis for future learning.

> Of importance, particularly in the etiology of mild mental retardation, are the complex physical and psychological deprivations to which some youngsters are exposed in their families and communities . . . An unfavorable social environment, disorganized family life, or other stress situations may of course also result in an ego defect with or without mental retardation.[103]

If a child is exposed to a wide range of sensory stimuli, he will have adequate first-hand learning experiences so that he may benefit from more abstract learning. The child who is from a marginal home often is unable to keep up with peers who are from homes where they have been exposed to educational toys, music, travel, and similar enculturating experiences.

Of the group of retardates that are institutionalized, many have congenital brain malformations. Goldberg et al. found that "in a survey of an institutional group for retarded children, 61 percent of the retardates were found to be associated with errors of intrauterine development."[104] Even if the retardation is caused by brain damage, there may be a direct relationship to an inadequate home situation.

Many patients from marginal homes are referred to music therapy for stimulation of interests and additional sensory experiences. They need the reinforcement of successful participation since their inability to compete with their peers often causes them to be satisfied with less than they are capable of achieving. Music activities can be structured at the level on which the patient is functioning, and through successful performance, the patient may gain increased confidence in his ability to learn new material. Music activities also may provide a setting for the learning of social skills and personal behavior patterns.

> It is seemingly, though not actually, paradoxical that we demonstrate our understanding of the child's aggressive action by setting firm limits on it. The hospital is a microcosm of the community at large; its tasks are to fulfill the aims of the community for its citizens, to produce in the child a sense of structure and conviction, and to establish limits within which he is free to act.[105]

Because the child may not realize that his behavior is inappropriate, the therapist must carefully reward or gratify every effort that the patient makes to conform to new social mores. The child who is from a culturally deprived home also may need music therapy as a means of stimulating his interests in object relationships as well as expanding his social contacts.

> Cultural factors play a large role not only in determining which children in a given community will be considered mentally retarded, but also when they will be identified . . . children from certain sub-cultures may score low on psychometric tests primarily because these tests are culturally biased. Studies have shown that the children from culturally deprived homes will score progressively higher on successive psychometric tests after exposure to social and educational stimulation.[106]

Gratification

There may be groups that are structured with gratification as the primary goal. Musical achievement may offer considerable gratification in itself. However, if performance also is rewarded by praise from the patient's peers or by adults, the gratification may be even greater. Many children seem to enjoy performing in programs if they feel assured of success. These performances also allow emphasis on grooming, appropriate group behavior to attain a musical effect, and both personal and social responsibility. Some patients may request individual music practice. This practice also can be gratifying, even though the gratification is due to musical accomplishment rather than to praise from others. Practice periods may be among the first experiences that the patient has in structuring a block of time for himself. If the retarded child has been institutionalized for a long period of time, he may be accustomed to having people tell him what to do with each minute. However, if he is to make adequate use of his leisure time, he must learn to work at goal-directed activities without depending on others to structure them for him. Fine and Dawson discuss the need to structure free time:

> Failure to adjust in the community was found to be largely the result of the patient's inability to utilize her own free time. She would have no difficulty on the job, but the long evenings and the weekends would hang heavy on the girl and result in her becoming depressed, restless or getting into difficulty, necessitating her return to the institution.[107]

Among the studies that are now being conducted in the area of retardation, there are many that are focused on community transition and the problems that the institutionalized patient faces in this adjustment. The use of leisure time is one important area in which music therapy can be utilized to assist the patient in preparation for community life.

Music therapy can contribute to the diagnosis and evaluation of retarded patients. It is of use in the treatment of emotional maladjustment that typically occurs with retardation. A further contribution can be made in the area of adaptive behavior, since the music therapy session can be structured to include a wide variety of social situations and opportunities for the patient to assume personal and social responsibility.

The Use of the Tonette with Retarded Boys

Paul Cotton

The tonette group was composed of seven boys of the "trainable retarded" level who had intelligence quotients ranging from 35 to 50. The age range was from 11 years to 14 years. They had all been institutionalized at least three years. The treatment goals for these boys were to help them to conform to group standards and to develop in them a sense of achievement. The music therapist believed that the musical situation most suitable would be a tonette group, or band. Each boy would have to learn to conform to certain standards to be a member of the tonette band, and, because the band would perform for others, a sense of achievement might result.

At first, an attempt was made to teach the boys tonette by using books. This was found to be impractical because the boys had difficulty translating the symbolism of notation into music. There was also difficulty in playing together because the students looked at the music and not at the director. Because of these hurdles, another method was devised. The boys were encouraged to explore the tonette and its sounds. During the first teaching periods, they were allowed to play as loudly as they desired. This helped release excess energy and seemed to result in better concentration during working periods. After much drill and practice, the boys learned the proper method of holding the tonette and the method of obtaining the correct tone. The therapist discussed and illustrated the position of the fingers on the holes of the tonette. After illustrating, the clinician helped each student. The same method of teaching was followed in teaching each note of the "C" scale. It was necessary to emphasize to the students that a note was repeated only when the finger movement of the director was repeated, and that a note was sustained until the finger of the director was lowered, or another note was started. It was helpful in working with this group to write on their fingers the letters corresponding to the notes, i.e., the letter "B" was written on the index finger of the right hand, etc. When playing a tune, the desired fingers were raised while the appropriate letter was named. This was found to be useful, later, when the boys played the root of chords while the pianist played music using the same chords.

The staff of the school believed that the treatment goals set for this group were reached by most, if not all, of the students. The students learned to take turns and to work together as a group. They developed a sense of achievement because they were able to perform on variety programs for other students and visitors at the school, and because of the congratulatory remarks received by the group, they felt that they had been successful.

The Drum Corps as a Treatment Medium

Carol H. Bitcon

In the music therapy program of a large state hospital, a drum corps was chosen as one of the major activities for retarded patients. Patient interest in the drum corps was minimal until the equipment was delivered. Then the patients were eager to "beat" the drums. The drum corps was composed of patients whose unit physicians had specified treatment goals for which the drum corps seemed appropriate, patients who asked to be included, and other patients for whom the program seemed likely to be helpful. The corps membership averaged 15 patients. Twenty-one male patients were programmed during the period included in this report. Each of the 21 patients was in the program for at least three months.

The mean intelligence quotient (IQ) of the 21 patients was 55, with a range of 30 to 82. The mean age of the patients was 21 years, with a range extending from 17 years to 39 years. Table 3 lists the disabilities that were present in the patient group.

TABLE 3

DISABILITIES OF PATIENT GROUP

Disability	Number
Cerebral Palsied	1
Severely hard of hearing (IQ 62)	1
Mongoloid speech	3
Oral inaccuracy	7
Industrially blind (glasses worn)	1
Mild stuttering	1
Frontal lisp	1
Epileptic (controlled)	9
Various forms of character disorders	8

The first step in training the corps was to group the patients around two large masonite tables. Each patient held one drumstick in his left hand. The therapist also held one stick and, together with the patients, counted aloud "one, two, three, four," while tapping the table with the stick. After this ten-minute exercise, the patients and therapist practiced drum strokes using the correct hand and stick position. This exercise was used to encourage the group to work together. The therapist periodically worked with the patients so that they were able to imitate her performance.

The counting eventually turned into "dah, dah, dah, dah, boom" (the boom meaning to drop the stick). The speed was varied. Sometimes the strokes were extremely slow for a five-minute period and then gradually accelerated to a more rapid beat. Individual patients were asked to beat the table, gradually increasing the speed of the beat. The patient was encouraged to perform in unison with the therapist, thus developing better control and coordination. After the therapist and individual patients had worked on the controlled beat, patients were grouped in twos and threes in order to perform together. Eventually, the whole group again would work together. In order to control the group, the therapist enforced close adherence to established rules in the drum corps program.

For three weeks, the patients and the therapist spent one-half hour each day working with one drumstick. Then the second drumstick was added. The same procedure was used for training the right hand as with the left, except that the patients held the left drumstick while learning to use the right. Acceptable use of the right stick was achieved in one week. A black circle was painted one-third of the way up the stick held by the left hand in order to assist the patients in remembering their left hands. This also helped to add emphasis to the left hand.

Each of the daily sessions ended with five minutes or more of marching. Different patients were selected to be leaders. The patients formed lines and marched around the room chanting "left, left, left right left." Some of the patients were never able to coordinate the word "left" with the left foot. The therapist occasionally marched with the group, but more frequently stood observing, commenting, encouraging, and assisting individual patients. A whistle was used to signal the marchers to start and to stop.

When the patients appeared to be losing interest in the routine drilling with the sticks on the table, a longer time was spent on marching. Chairs and other obstacles formulated a course, and a large mirror was placed along the route so the marchers could observe themselves, thus leading to better posture and motion. Recorded march music was utilized occasionally. Marching helped to release undesirable tensions built up during the period of work with the drumsticks. When a patient marched well, he was asked to march alone so that the others could watch and comment. If a patient was having problems, a more accomplished patient helped him, and the two practiced together. When the patients were first asked to observe each other and to comment, many of the statements were derogatory. However, as each patient had his turn, many valuable criticisms, which would have been difficult for the therapist to offer, were readily offered and accepted by the patients. The patients who could not keep a continuous beat on the table with drumsticks were given cymbals to play.

After four weeks of practice, drums were assigned to the patients. With the assignment of instruments, possessive behavior and insecurity became evident. There were continuous questions regarding the equipment. The therapist believed that the patients should be allowed to be possessive, because, in an institutional setting, the opportunity to possess is limited. The patients marched for one week with the drum and no sticks. Then the drumstick for the left hand was added. Next the patients returned to the masonite tables and drilled for three days in order to review each step in the progression of striking the table and lifting the sticks at various speeds.

Preliminary training lasted five weeks. Finally, sticks, drum, and marching were combined. For four consecutive days, there was uncontrolled banging and undisciplined participation. After the fourth day, the drums were put away and each step was reviewed daily for the next week. Again the sticks and drums were combined, but this time by sections. Eventually, the sections were combined. Marching was not added to the corps' activities for two weeks. After nine weeks of practice, the patients were ready to work on controlling the drums when marching.

Withholding the drumsticks was a valuable, but painful, stimulus. The patients complained, pouted, and periodically refused to march in attempts to manipulate the therapist. When the drums, sticks, and marching finally were combined, there was a good level of performance and utilization of energy so that tenseness built throughout the half hour. It was found useful to spend approximately three minutes at the end of each session in free play with the instruments. Each patient would bang away, loosen up, and explore. Through these free play sessions, all of the patients relaxed and became more familiar with their instruments.

The therapist held weekly meetings with the patients, and various projects were proposed. The patients made suggestions as to where they might perform on the hospital grounds, discussed behavior problems, and talked about being on television and in the movies. One successful project coming from these meetings was a drum corps scrap book. The patients were asked to look for pictures of bands, marching units, and instrumentalists. The patients enthusiastically collected pictures from ads, magazines, and newspapers. The scrap book contained pictures, news releases, and specially written comments made by each member after participating in special events. The patients spent one session drawing pictures of the corps and of themselves. These pictures were placed "tenderly" in the book.

Gradually, there was a "we" rather than an "I" attitude in the group. When one section was assigned to practice, others watched and criticized in a constructive manner. When the sections played together, they worked as a unit rather than as competitive individuals. Discipline at this point was not a problem. When a cadence was finally introduced, it was introduced as a tune. The group would chant the tune and then combine the chant and the drumming. When the cadence became garbled, the group practiced the chant without sticks. The tune was useful in teaching the three cadences learned.

The first opportunity the patients had to perform, after 24 weeks in the drum corps program, was for the regional conference of the National Association for Music Therapy. Following this experience, the corps participated in a local three-mile parade and finally in a five-mile Christmas parade. In order to prepare for this parade, two Marines from the local air base worked daily with the patients in marching. The "military" approach was an exciting and refreshing change for the patients. Daily, the patients, volunteers, and auxillary units marched entirely around the hospital grounds, two and one-half miles, in order to get in condition for the parade.

Many patients taking part in the drum corps made progress toward their treatment goals. One patient, who had no tolerance for neatness, progressed in his attempts to improve his appearance. Staff members of a unit housing eight of the patient group noticed a change in the appearance of three patients. Two patients seemed to become more sociable. During the period of time reported, four patients separated from the institution, and additional patients were placed in the corps. With the group performing with self-discipline and control, the new members rapidly adjusted to the program and readily learned the necessary skills. The corps still functions.

Music Therapy as a Basic Program for the Handicapped Child

Louise Whitbeck Fraser

Introduction

The following clinical procedures were developed in a "home study school" for retarded children. The program of this school is based on educational rhythms and eurhythmics in the most complete manner possible. This approach is used to establish a program in which each handicapped child can develop his potentials to the best of his ability.

Some of the children are rejects from the public schools. Many of them have no measurable intelligence quotients. Included in the classes are mongoloid children, children with different types of brain injury, and mental retardates. Some of the students, including the blind and the deaf, have multiple handicaps. The students range in age from 3 to 20 years.

Described here are techniques for the use of music to develop feelings of security, to instruct, to develop muscular coordination, to develop speech, and to develop socialization. These techniques have been found successful in work with the students at the "home study school."

Methods for Establishing Security and Introducing Attention and Listening

Security seems to be found by these children when they are performing under an appropriate amount of pressure and enter the music activity with a good attitude. Therefore, the method of entering the music room is important. The children, guided by a music therapist, form a single line outside their classroom and sing as they walk to the music room, "______ is our leader, our leader, our leader. ______ is our leader, he will lead us to our room." (In the blanks, insert the name of the child who has been chosen as a leader.) Each child, upon entering the room, finds his place shown by his teacher, on a "sit-upon" on the floor and waits quietly for further directions. Recorded music with an emphasized walking rhythm is then played. (Ruth Evans Records, 201-202 is suggested.) The teacher takes each child by the hand and walks with him in a circle, returning each time to the child's place on the floor. To help the child become aware of himself and of what he is doing, the teacher tries to help him associate the action with the word by saying how he is moving at the same time he moves--thus, "walk, walk, walk" is said until the walking is completed. Soon, the group as a whole can get up and walk independently to the music of the record. Progress is accelerated by the feeling of achievement that the children derive from this independence. This same method is used in teaching running, walking on tip toes, and clapping as they walk.

Success is measured by the children's enjoyment and the pleasure they find in working with music. Nearly every desirable capacity they have will be brought into use through music. It is the unity of music and movement that is valuable. Much time must be allowed for this instruction, because these children assimilate the various reactions to music very slowly. In this unhurried response, they keep their feelings of security. That is why lessons based on individual experience with balls, hula-hoops, rhythm sticks, and musical instruments always must be flexible, clearly explained, and given only at the tempo accepted by the individual child.

In working with balls, ten-inch balls of bright colors are used. The children try out new skills, such as learning to bounce the ball and catching it with both hands, until finally they can bounce the ball while saying, "bounce, catch, bounce, catch" to the rhythm of the walking music. Later on, to help coordination of movement, the child can try walking and bouncing the ball at the same time. This activity becomes group experience guided by music.

The children delight in using a tambourine or Indian drum to signal group activities. This is done by choosing one child to be the "teacher" and giving him a drum. This child may beat out a rhythm for the other children to follow by walking, running, or skipping, as the music indicates. The child acting as "teacher" is shown how to beat a slow, even beat contrasted with a fast, even beat, and how to change from one pattern to another after each one has been mastered separately.

Another useful aid is a brightly colored hula-hoop that can be rolled, spun, or swung. The hoops can be scattered all over the floor and each child allowed to choose his own hoop, which becomes home base. The children start walking or running freely around as the music directs; when the music stops, they are told to hurry to their home base. This introduces a color into their experiences and is useful as a way to start teaching color recognition.

There is also a period of relaxation during the lesson. At that time, all join in sitting quietly on their "sit-upon" just listening to a lullaby or doing simple finger plays to songs sung by the music therapist. It is during a quiet period of listening that children may assimilate the activities they have tried.

Aids for Developing Ability to Listen and Presentation of Printed Words

The procedure for entering into the music room is always the same. The children come in swinging their arms and singing softly as they take a place on the floor on the "sit-upon" in front of their teacher and wait for instructions. Music up to this time has been very simple and direct. *In responding to it, the children have learned to listen to music rather than simply hearing it.* Now, instructions are given for better listening. These instructions are nonverbal and given either by a piano or percussion instrument. The names of the children, having been previously printed in large and clear letters on separate cardboards, are introduced. The children must watch as each cardboard is held up and listen to the name called. The child having that name stands and is told to listen for the directions from the instrument played. If it says "march, march, march," and the child responds quickly and correctly, he is recognized by the clapping from his listeners and proudly takes his seat. Each child is asked to perform in a like manner as his name is shown and called. This type of training can be carried on by having two or three patterns played such as "march--run--march." The ability to listen and a growing awareness of what is being done have developed together.

Introduction of Action Words

The words "run," "walk," "jump," "hop," and "skip" are printed in large letters on individual cards which are placed on the chalkboard ledge. A child is requested to locate the card that tells the name of the action being played. If the child can find the correct word, he may pick up the card and perform the act. This type of training can be made more complicated by combining a child's name with a certain action. By listening to the music, they can find out what each one is told to do.

Another approach to good listening can be obtained by having the group stand in a straight line with their arms extended in front of them. A chord is struck on the piano. They are told that if the tones played go higher on the piano, they must move their arms up, and if tones go down their arms must go down. The piano may make rapid changes which delight the children who will try to follow the scale correctly. This can be done individually, calling for quick thinking and muscular coordination. Each child builds self-esteem by trying to follow directions correctly.

Children should never feel that they are being subjected to sounds that never cease. Music then becomes a noise to which they do not really listen, but which does influence them. They either recoil from it, or they try to compete with it by making more noise themselves. Activities must never be continued after attention lags. Therefore, there are frequent rest periods in which all may sit and listen to a quiet record.

Development of Muscular Coordination

Isolation exercises offer much that the child needs. Seated in front of their teacher, the children are shown a series of simple finger plays. A song is sung that can be illustrated by use of the fingers and thumbs. Each child must be considered individually and helped to gain independent movement of his fingers. A circular movement of the thumb alone can show that "Thumbkin" can dance. Next, the whole hand is exercised by open and shut action accompanying an improvised song. The wrist is now located and named by each child in readiness for a wrist exercise. Each child holds one wrist with his other hand as he sings in rhythm: "I turn my wrist round and round." Change from right to left wrist.

For arm exercises, the children stand and space themselves. Spacing is done by having the children stretch their arms directly at full length in front of themselves and turn a complete circle in this position, taking care that they do not touch anyone. After spacing, they are ready for exercises. After each child has learned what and where his elbow is, a record such as RCA Rhythm Activities, Vol. II, is played. Each child makes a shelf with one hand, places the opposite elbow on this shelf, and makes circular turns with elbow as a pivot in time with music. At the same time, he says, "I am turning my elbow around, I am turning my elbow around." Then the process is repeated using the opposite elbow.

In the next step, each child finds his right shoulder and places his left hand on it. He then turns his whole right arm in swinging movements around in complete circles to the music, while he repeats, "I am turning my arm on my shoulder." The same procedure is reversed for exercise of the left arm. The same set of exercises can be used for the legs with slightly different procedure. In another exercise, the entire leg is swung from the hip. The child supports himself for this exercise by placing the left hand on the back of a chair for balance while the right leg is swung to music. The child always says what he is doing, such as "I am swinging my leg from my hip." In this way, the child can learn the names of joints of his legs and arms.

Exercises for better posture can be promoted by having the children march around the room to music with objects balanced on their heads. The tempo of the music starts out slowly and increases as the children's posture improves (Ruth Evans Records).

Introducing and Improving Speech

Nursery rhymes are played on the piano and sung aloud by the teacher. Children that have speech join in, gradually learning the words. Others, without speech, are seen mouthing the words without sounds. The same familiar songs are sung to syllables, such as la-la-la, thus encouraging and enabling a speechless child to try for audible sounds. Eventually, children without apparent speech often participate audibly through complete songs.

Songs from the book, *I Sing My Way to Speech*, can be used to strengthen different speech muscles. Relaxation must be acquired in training for speech. First, a stretching exercise is directed. After spacing themselves, the children stand up straight with their hands stretched as far above their heads as possible. A chord is sounded on the piano and a command given to the children, "Push up-up-up-up." As each "up" is pronounced, the chord goes up the scale and the children are urged to push harder and harder. Finally, a low, loud chord tells them to relax. They are to relax by bending their bodies down from the waist with their arms dangling. This relaxation exercise is needed for a short time every day along with each of the speech assisting exercises described above.

Socialization Through Music

The children form a circle. This is done in the following way. Each child takes his place on the floor and is shown how to offer his hand to another. Thus, everyone helps to construct the circle. This is changed from a large circle to two small circles by dividing the number of children. This can be shown on the board by drawing a large circle and then drawing two smaller circles. From these experiences with circles can come the learning of games in which a circle is the center of action. This training produces an awareness of others and the fact that they are needed in order to have fun in circle games. An acceptance of one another and a desire to help each other in joining hands may be the beginning of social behavior. These games, accompanied always by music, can develop into more advanced activities which require acceptable social behavior and cooperation with partners.

Rhythmic Movement

In the beginning, simple movement to music is introduced by having the child move in circles with his arms stretched out like wings. This is a difficult combination of movement for these children. The tension felt by most children of limited experiences tends to cause them to keep their arms close to their bodies at an angle similar to the prenatal position. It takes much patience and repeated attempts in order to develop a free movement in space with arms extended. A child who has fewer handicaps can sometimes move very easily to the rhythm and can be a great help to the others by letting them see how it is done.

Greater movement can be aided by the use of a flimsy silk scarf a yard or less square. The child first learns to hold on to one corner of the scarf and to run with it as he watches it float behind him. He may try holding it high as a flag, or turning in circles as he watches it follow him. Later on, he learns to float it high like a cloud, as he hangs on to a corner with each hand. He can float it at his waist, high as grain or grass, or he can float it low as a stream of water. He learns to enjoy movement with the scarf, and when the record, "My Playful Scarf," (Children's Record Guild, No. 1019) is played, he can use the scarf as the record directs him--as a cowboy with a tie around his neck, or as a pirate with a sash around his waist. He can also float it as Superman's mantle. All of these imaginative games develop rhythm in movement.

The chalkboard can be used as an aid. Children draw circles on the board to the song, "Little Red Wagon" (Children's Record Guild, No. 1004). The circles are large and awkwardly formed in the beginning, but with practice they become more uniform in size and shape. This establishes use of the smaller hand muscles that are later used in painting, writing, or craft work.

Thus, it can be seen that music therapy can be basic and effective in the development of better skills in severely handicapped children.

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PART VII

MUSIC THERAPY FOR THE PHYSICALLY DISABLED

SISTER M. JOSEPHA, O.S.F.

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MUSIC THERAPY FOR THE PHYSICALLY DISABLED

Music Therapy for the Orthopedically Disabled

Sister M. Josepha, O.S.F.

Therapy for the physically disabled tends to take on more of a rehabilitative significance than does therapy for other chronic illnesses. The function of rehabilitation, as it is understood today, involves the development of the physical, mental, social, cultural, and vocational capacities of a disabled child or adult so that he may meet his needs to the degree possible for him. This is done through the efforts of a rehabilitation team composed of all who can contribute toward the total recovery of the patient.

Various body deformities and affections of the spine and joints are included among orthopedic conditions. The most common of these problems are: congenital anomalies, in single or multiple form; acquired deformities, such as spinal curvatures and rheumatoid arthritis; poliomyelitis; neuromuscular affections; fractures; and amputations. The obvious treatment goal of orthopedics is the restoration of physical function. Specifically, this may mean the increase of joint motion, the regaining of muscle strength, or both, or the promotion of coordination. This is not to be affected, however, with disregard of the orthopedic patient's psychological manifestations, or his need for social adjustment.

In the field of pediatrics, greater emphasis is placed on concern for the well-being of the whole child than on attending to the handicapping condition itself. The treatment goal for the handicapped child is ". . . to enable that child to progress in as normal a manner as possible in his physical, emotional, mental and social development."[1] Although this implies the need for a team approach in the overall treatment program, it does allow for individual emphases on certain aspects of the child's development, as dictated by the peculiar therapeutic values of the particular treatment medium.

Values of Music

Several articles in the literature concerning the use of music with the physically disabled are concerned with the following orthopedic conditions: tuberculosis of the hip and spine, hemoplegia, Perthe's disease, post-polio conditions, congenital amputation, fracture, Erb-Duchenne paralysis, and muscular dystrophy. These reports indicate that some teachers and therapists have observed that music has definite values for the physical, social, and psychological development and/or adjustment of the orthopedically disabled.

McAlister,[2] Roan,[3] Gilliland,[4] and Sister Josepha[5] have found that the playing of musical instruments is an effective means for increasing muscular strength and joint motion and for developing coordination. Although the use of music from this physical-functional standpoint is less well known than its use in psychiatric rehabilitation, medical prescriptions for increased mobility or endurance at a particular point of the body, or increased coordination of parts of the body can be carried out through the playing of specific musical instruments. Denenholz has said that with proper systematizing of the movements and motions involved in musical instrumental techniques, musical performance becomes a "tool of functional therapy."[6]

In another article, Gilliland[7] called attention to the beneficial effects that the playing of wind instruments can have on the development of breath control. According to Brim,[8] similar values can be derived from singing. She stated that singing can be used to increase vital capacity because its sustained nature demands much greater inhalation of breath than is necessary either for speaking or for the maintenance of life.

The social benefits afforded by music to the handicapped and the nonhandicapped might be said to differ in degree rather than in kind. Allen[9] stressed the use of group music activities to promote interpersonal relationships among handicapped children because these children ordinarily have little or no opportunity to relate to each other as part of a group. Clingman and Belstrom[10] and Sister Josepha[11] also have indicated the social value of music as a thing to be shared and as a form of communication.

Normal children have various ways of giving release to their emotions. The handicapped child frequently lacks ordinary means of emotional release. Bruner[12] believes that music can fulfill a definite need for this child as an avenue of emotional expression. According to the opinions of Crane[13] and Gilliland,[14] this musical experience can be emotionally stabilizing.

Certain psychological values of music have special significance when applied to the orthopedically handicapped. In its creative aspect, music allows for such individuality in performance that even the physically handicapped child can participate with some degree of success. This, in turn, serves to compensate for his other deficiencies, thus promoting in him feelings of self-confidence and responsibility. Sister Josepha[15] has related this particular value of musical performance to several types of physically handicapped children. Clingman and Belstrom[16] also pointed out the value of musical performance in the area of compensation. In addition, they held that it is a boost to the morale of the handicapped child to perform in a group music situation, and to know that he is wanted in the group because he, like others, has his contribution to make.

Similar to this last-mentioned value of music is that stressed by Kerson[17]--participation in music activities is an effective means of giving a sense of accomplishment to the child who is handicapped almost to the point of helplessness. Music participation, in this instance, can serve to offset the child's sense of isolation that is engendered by his feelings of uselessness and incompetence.

Therapeutic Applications

Application of proper music to the orthopedically handicapped, so that it has therapeutic value, requires a variation of emphasis according to the particular disability being treated. This is evident in the following examples of therapeutically directed music activities for specific orthopedic disabilities.

Clingman and Belstrom[18] reported the use of selected musical instruments for exercising certain parts of the body. Playing the baritone horn was taught to a young girl as a means of strengthening her abdominal muscles which had been in a weak condition for years. Playing the cello was used to overcome residual stiffness of the right arm and wrist of a child who had been afflicted with infantile paralysis. Although physical restoration was the most apparent therapeutic effect in both instances, the musical activity also led to the establishment of feelings of self-confidence and self-worth.

Clingman and Belstrom also cited an instance in which the playing of a musical instrument was directed primarily toward a psychological goal. A girl, whose right arm ended at the wrist and whose left arm ended at the elbow, was taught to play a trombone that was particularly adapted to her handicap by the manufacturer. The adaptation consisted of a device that would permit the slide of the trombone to be controlled by foot rather than by hand. The satisfaction and self-confidence that the girl derived from this accomplishment prompted her to attempt to play the piano, even without the use of prosthetic attachments. She was able to play simple soprano and alto parts in this manner.

Brim[19] described a music program that was planned for post-respirator patients. Singing was used as a means to increase their vital capacity. Singing classes were conducted for 44 patients (varying from 17 to 29 patients per session) over a period of ten months. The group met for 30 minutes each day, five days of the week. The primary aim of the program was to stimulate and motivate the desire for better functional achievement. The therapeutic results were both physical and psychological: physical in the development of vital capacity; psychological in the ensuing feelings of self-confidence.

Sister Josepha[20] has given examples of instrumental performance being used as a therapeutic medium for various orthopedic handicaps. In the first example, piano performance was used successfully to develop muscle strength and joint motion in the left shoulder, arm, and hand of a young girl who was afflicted with congenital Erb-Duchenne paralysis. Joint motion and muscular strength were gradually developed through the use of music requiring those arm, wrist, and finger motions that are essential to normal function, and by approaching those motions in progressive order.

Different musical techniques were used to attain particular therapeutic objectives: through correct right-hand function, a legato concept was established and used to stimulate individual finger action in the left hand; double-note playing at intervals of fourths and fifths was used to develop an arch in the left hand; melodic progressions were gradually changed from scale steps to chord skips for increased finger abduction; musical compositions requiring crossing of hands on the keyboard were selected for the development of horizontal adduction in the shoulder; and gradual increase of note span on the keyboard was used to develop horizontal abduction of the shoulder. To avoid overcompensation in the handicapped shoulder, periods of conscious relaxation were interspersed in each lesson.

The second example concerned the use of piano performance to motivate arm and finger function in a girl with a post-polio condition that permitted only slight use of the right arm and wrist and partial use of the right hand. During her course of study over a period of five years, she showed slight but steady progress in right-hand function. Although complete restoration of physical function was not possible with this condition, the functional level that she attained at the piano gave her the courage to attempt performance of other tasks requiring similar manual dexterity.

The third example illustrated the therapeutic effects that piano performance can have on a deformed person. A young girl with a congenital loss of the left hand was guided in piano playing from one-note arm-playing through advancing degrees of multiple-note playing, facilitated with a specially-devised prosthesis. Sister Josepha related the music activity to specific therapeutic results as follows: the demands made on the arm and shoulder helped to strengthen the muscle of the arm and to stimulate normal growth in the arm; facility in the use of the piano prosthesis led to a greater dexterity in the use of the practical prosthesis, especially where the motions of pronation and supination were concerned; the ability to play the piano proved to be an important means of compensation, both as a direct attempt to overcome the handicapping condition itself, and as a substitute for other skills that would never be attainable with this condition; and finally, the need of sharing music promoted the development of social relationships.

Four years after this girl began the study of piano, she was introduced to study of the violin. She had to approach the violin in a left-handed fashion, using the right hand for fingering and the left arm to draw the bow across the strings. This latter effect was accomplished by means of attaching the bow to the practical prosthesis with an improvised gadget. Use of the bow was necessarily limited to its center portion because of the missing wrist articulation. Violin playing afforded this young girl even greater opportunity for social development through the interaction that is demanded by ensemble playing.

Research Literature

There is an extreme poverty of available research literature relating specifically to the therapeutic use of music with the orthopedically disabled. This is a serious lack in the field of music therapy. Gates[21] notes that musicians in general have not fully realized the need for research on the physiology of their profession. To help remedy this situation, with respect to the teaching of wind instruments, he organized a two-day interdisciplinary seminar on the subject. This seminar was attended by physiologists and musicians who hoped to initiate steps toward the development of ". . . a common vocabulary, body of knowledge, and understanding of principles of respiratory physiology as these apply to the playing of wind instruments."[22]

The physiological aspects of instrumental performance are perhaps more commonly recognized in the area of piano playing. Ortmann[23] attempted to apply the complex problem of physiologic mechanics to piano technique through the following considerations: the physiological organism, the general aspects of physiological movement, and the touch-forms of piano technique. Although his work embodies an experimental study of muscular action used in piano playing and of its effects on the piano key and piano tone, some of the material contained therein might well be applied to the therapeutic use of piano performance in orthopedics.

Published articles on the use of music with the orthopedically disabled are concerned with the physical, social, emotional, and psychological values of music. The application of these values in the field of music therapy parallels their application in the field of education, but with some differences in respect to degrees of need, variations in emphasis, and adaptations. Both instrumental and vocal performances have a rehabilitative significance, especially when they promote physical restoration.

No experimental research relating specifically to the therapeutic use of music in orthopedics has been carried out. At least, no written account could be found. However, need for this type of investigation has been recognized in the field of music education. Only the experimental study by Ortmann of the muscular action used in piano playing and its effect on the musical results of the playing has been published. Although the primary purpose of this work is educational, it could serve as a reference in the field of music therapy.

It is certain that the possibilities of using musical performance--instrumental, vocal, and rhythm--for the rehabilitation of the orthopedically disabled have not been thoroughly studied. This is an area that would benefit greatly from experimental investigation. Almost every kind of physiological involvement can be attained through musical performance.

Current Practices

The following illustrations indicate some of the rehabilitative significance of music therapy for the orthopedically disabled. Many of the present-day music therapy programs for physical disabilities are characterized by the rehabilitative approach. When this approach is used at an orthopedic hospital or center, it often occurs in a setting that is geared entirely to rehabilitative purposes. The following papers, by Kozak and Rogers, clearly describe the organization and function of the rehabilitative type of therapeutic setting.

The current practices in music therapy for the orthopedically disabled relate mainly to the physical aspects of rehabilitation. Music also can be used with the orthopedically handicapped primarily for its psychological values. This is especially true of music therapy for the child with muscular dystrophy. The dystrophic child needs to be stimulated to function at his capacity in order to prevent disuse atrophy of his muscles. But even greater than this need is his psychological need for accomplishment and for feeling wanted. The paper by Herman presents some of the implications this disability area has for the music therapist.

It is impossible to list all the specific adaptations of music to individual orthopedic handicaps, for they are as numerous as the handicaps themselves. The following reports of current clinical practices describe some of the possibilities of therapeutic application of music in this disability area. It is intended that each report demonstrate particular aspects of a vast field of endeavor. Lest this simplification of a complex problem result in an overemphasis of either the psychological or the physical approach, it must be remembered that in function the two are very closely interrelated.

Music Therapy in a Rehabilitative Setting

Yolanda Kozak

This discussion considers the activities of the music therapist and the possibilities for music therapy in a rehabilitative setting. The nursing service in this setting is composed of specialized personnel who are trained to meet the demands of orthopedic, general pediatric, and post-surgical problems. They attend the patients, some of whom are convalescent poliomyelitics, paraplegics, amputees, burn and plastic surgery cases, fractures and difficult metabolic problems, and those who have suffered cerebral vascular accidents. All therapy is planned with consultant orthopedists during clinics which are held three times each week. The therapies involved are physical therapy, occupational therapy, speech therapy, and music therapy.

The musical activities used in this rehabilitation center can be classified as: exercise to music, speech activities to music, eurhythmics, functional use of the various keyboard and other musical instruments, and music appreciation. Music activities are used to help lessen physical handicaps, for developmental assistance, and for supportive assistance to the patient while he is in the hospital.

When speaking of the physically handicapped, it should be remembered that other handicaps, such as mental retardation, emotional disturbance, mental illness, senility, or regression, are often present. Of necessity, all of these things are taken into consideration when planning treatment for the individual patient. Besides offering activities which are in themselves therapeutic, music therapy is used in support of activities conducted by the other therapies.

Orders for music therapy are received from medical doctors. In the case of a referral by another member of the staff, permission must be received from the patient's medical director before involving the patient in music therapy or any activity at the hospital. Unless a medical problem exists, there is a blanket prescription to treat all patients coming into the hospital for training purposes. This includes the young cerebral-palsied children coming in for evaluation and training, the patients coming in for speech work, and the patients requiring only fitting and training in the use of prostheses.

One cannot answer all questions or illustrate all the possibilities for music therapy with these disabilities, but mention will be made of the background and treatment of three patients selected for case presentation because of the purely orthopedic character of their handicaps.

Case 1. This study involved a ten-year-old boy who was born with congenital anomalies of all four extremities. He had been a patient, intermittently, and was readmitted to the hospital for a reevaluation and proper fitting of his crutches and prosthesis.

The boy came into the music therapy department at his own request, stating that the music teacher at home had been reluctant to let him attempt playing an instrument because of his disabilities. Although his upper extremities were deformed, he had had no operative procedures on them. The objective of his therapy was psychological-supportive assistance.

Although this boy had use of only three digits of the right hand, he was able to play the organ and became quite adept at sustaining tones by means of finger substitution. Since his range of shoulder motion was good, he could move from one octave of the keyboard to another. Despite the elbow contracture, the range of motion at this joint was satisfactory. Because of joint tightness, he lacked adequate force for depressing the keys on the piano. However, he was able to manipulate organ keys well. He was happy with the thought of playing the organ and requested that one of his favorite hymns be written out for him. He learned to play this, along with other pieces, and took it back home with him--confident that he had accomplished something.

Case 2. This case was that of a girl having a phocomelia (the condition of having the limbs extremely shortened) of the lower extremities, for which she was fitted with prostheses. In physical therapy, she was taught to walk with a swing-to gait. Rhythm was used as an aid in smoothing out the gait pattern that had been established. Occupational therapy was directed toward the development of the upper extremities and for training in activities of daily living. Music therapy was directed toward control of the upper extremity with concentration on shoulder activity. Because the elbows had been fused approximately at right angles, the autoharp seemed the appropriate instrument for this exercise.

Case 3. This subject was a male adult who had suffered an attack of polio. Initially, music therapy for him was of the supportive type. Later, as his condition improved, piano work was begun and the activities were geared to benefit his left hand because his involvement was more severe on the left side. He showed good finger dexterity of the left hand in playing one-note melodies and one-note chord patterns. However, he did not have sufficient strength in his fingers to keep the distal finger joints partially flexed in a normal playing position. Much of the power for moving the fingers to play arpeggio-like patterns came from wrist and arm motion rather than from the individual fingers.

The right hand appeared to function well. The patient became interested in the chord organ, which he learned to play. Eventually, he began to recognize for himself that this type of exercise was beneficial and, thereafter, was motivated to continue making use of both hands in playing keyboard instruments.

Among the severely handicapped are occasional congenital bilateral upper amputees. A child with this disability is trained to use his feet to meet the needs of daily living. The music therapist has various means at her disposal for helping develop skill in foot control. She can encourage and direct a patient to perform rhythmic activities and actions to songs with his feet, to play rhythm instruments with his feet, and to hold a horn with his feet. If a portable organ is placed on the floor in an appropriate position, he can learn to play it with his feet. After the upper prosthesis is fitted and training begins, the music therapist can use rhythm--alone, with a melody, or in a song--as a stimulus for the development of control of the artificial limbs.

The material that has been presented in this paper is not comprehensive. However, the three brief case studies and the recommendations serve, at least, to indicate some of the uses of music therapy for the orthopedically disabled.

Music Therapy in a State Hospital for Crippled Children

Lucretia Rogers

The music therapist in this hospital for crippled children is a member of a rehabilitation team composed of various medical specialists and therapists working at the hospital. Collaboration is facilitated by having the music therapist take a two-months' orientation course in orthopedics under the supervision of the physical therapy supervisor. All music therapy is initiated upon an order from the orthopedist, the neurologist, or the psychiatrist. Progress notes from music therapy are placed on the patient's medical chart. Music therapy is indicated for the following types of patients:

1. A polio patient with muscular weakness, or one who has had surgical corrections with established, graded, exercise routine in physical therapy, and who is ready for muscular strengthening or further help in muscle reeducation.
2. An arthritic patient with rigid joints and subsequent limited range of motion.
3. A patient with circulatory problems, spina bifida, or paraplegia caused by traumatic spinal lesions.
4. A congenitally blind patient with emotional disturbance, distorted balance, and pseudo-retardation, as well as visual disability.
5. The orthopedic patient with deafness, provided that he needs speech therapy which can be facilitated by music.
6. A mentally retarded patient with orthopedic and neurologic problems.

The music therapy program includes a wide range of music activities. Because they are orientated primarily toward rehabilitation, they relate mainly to performance. The following music techniques are commonly used:

1. Piano: Practice can be structured to provide an exact amount of resistance, range of motion, finger flexion and extension, and foot dorsiflexion. One advantage of this activity is that it is frequently accessible at home for continued treatment following hospital discharge.
2. Rhythm band instruments: They provide an increased vocabulary of movement for the cerebral-palsied patient and meet the limitations of the orthopedically handicapped.
3. Exercises with rhythm: Properly administered and guided, they can facilitate reciprocity of movement in all four extremities.
4. Harmonica: This instrument brings into play hand control (grasp and release), hand-to-mouth action, and breathing and swallowing, as well as increase in vital capacity.
5. Mat exercises: Through this means, a patient can move freely for range-of-motion exercises, stimulated by rhythmical, musical accompaniment.

6. Hand dancing: This brings the satisfaction of rhythmic expression to those who are nonambulatory.

7. Marching and crutch walking: Even though a patient is in a wheel chair that is pushed by another, he is stimulated by the rhythm of music and is motivated by the satisfaction he derives from the activity. When a pattern of crutch walking has been established in physical therapy, it is implanted more thoroughly in the patient's mind if it is associated with a familiar, well-defined rhythm.

8. Ukelele, guitar, and mandolin: These may be used for finger and wrist flexion and extension.

9. Violin, cornet, trombone, recorder, etc.: Use of these promotes hand and finger coordination as well as range of motion.

10. Autoharp: This easy-to-play instrument provides opportunity for finger and wrist extension and flexion as well as satisfaction in performance (hearing full chord tones after only a minimum of physical exertion).

11. Singing--alone or with others: Provides opportunity for aesthetic satisfaction, increased vital capacity, and better adjustment and acceptance of hospitalization and treatment.

12. Preparation and presentation of operettas and music programs: Such activities are important, not only for the motivation and satisfaction provided, but also because of the aid they give to the development of positive attitudes toward disability. Participation in this type of activity in the hospital setting fosters continued normal participation in school, church, and community groups after discharge.

Therapeutic application of music to a particular orthopedic disability requires adequate knowledge and understanding of the patient's handicap as a basis for selection, evaluation, and possible adaptation of a specific music activity. Sometimes, the music activity itself is the primary therapy; sometimes, it has a supportive relationship to other therapies. The following two case studies have been selected to illustrate these two possibilities.

Case 1. This patient was a ten-year-old girl with a diagnosis of rheumatoid arthritis, generalized, affecting all joints. Her characteristic deformities were ulnar deviation of the fingers; wrist drop and ulnar deviation; flexion contractures and deformities of elbows, wrists, knees, and ankles; involvement of proximal interphalangeal joints of fingers producing fusiform, spindle-shaped swellings.

The patient was evaluated on piano since this instrument would provide just the right amount of resistance and graded range of motion. Her love of music and her desire to be able to play the piano were positive motivating factors in initiating treatment.

It was necessary to position her at the piano very carefully. Her arms were placed in deltoid slings to remove all strain on shoulder and elbows; her feet were positioned with blocks under them to relieve all strain on ankles, knees, and hips. She was barely able to depress the keys during the first treatment session and was able to reach only a major third in the key of C. A series of simple finger exercises were arranged by the music therapist (r. hand--CDE, DEF, and EFG, using fingers 123, 234, and 345; l. hand--CDE, DEF, and EFG, using fingers 543, 432, and 321). Simple duets were performed by having the patient play designated single notes with designated fingers while the music therapist improvised an accompanying part.

The patient came for a music therapy session for 30 minutes each day for a five-day week. She was in treatment for almost six months. At the end of this time, she could extend her fingers from C to A in both left and right hands. She could play each finger individually and finally reached recital performance level. Upon discharge, her parents were given written instructions for use in aiding her continued practice at home.

Case 2. This case concerns two four-year-old girls with similar diagnoses--congenital amputees, above the elbow--with congenital anomalies of lower extremities. The two girls were ordered to music therapy for motivation in using new bilateral upper extremity prostheses. Prosthetic fitting and basic gross motions had been completed in physical therapy. Fine motion and activities of daily living (ADL) were practiced in occupational therapy. (The ADL training board is standard equipment for first lessons in manipulative tasks.) The two patients were assigned to have treatment together so that one could challenge the other.

Wrist bells were used in music therapy. These were grasped in the prosthetic hooks, and a rhythmic choreography was worked out wherein all basic motions were utilized. Stress was placed on the importance of smoothness and dexterity. Both patients took pride in performance and seemed to enjoy greatly their music therapy sessions. In this particular case, music acted as a supportive therapy to physical and occupational therapy.

Music Therapy for Hospitalized Children with Muscular Dystrophy

Frances Korson Herman

"Progressive muscular dystrophy" is a term used to designate an extremely crippling disease that is characterized by slow, progressive degeneration of the voluntary muscles. Although the involuntary muscles are generally not affected, a rare form of the disease does involve muscles of the heart. The degeneration progresses until all the muscles which normally can be controlled are affected. This is manifested clinically by observed weakness and wasting of the muscles and by contracture formation as a result of muscles becoming replaced by fat and fibrous tissue.[24]

There is no known cure and no specific treatment for muscular dystrophy. Treatment in general is directed toward the prevention, correction, and minimization of contractures, and toward the maintenance of functional activities. Diet and medication are prescribed for the building up of body resistance and for the stimulation of the building or repair of tissue. Nursing care is directed primarily toward teaching the patient to live a full active life within the limits of his muscle strength.[25]

Over one-half of the victims of this disease are children between the ages of 4 and 15. When working with these children, one must be as aware of their physical limitations as of their emotional needs and difficulties. Those in advanced stages of the condition show marked degrees of weakness and fatigability. Their mobility decreases until eventually they lack strength to propel their wheelchairs. At this point, they meet growing restrictions in their activities with their peers and, if left alone, most of them will resort to excessive viewing of television.

Of particular concern is the possibility of the development of disuse atrophy. According to Milhoart, "Many patients, because of overindulgence, do not perform many functions they are still able to perform and, in short, anticipate the disability that the natural course of the disease produces."[26] A dystrophic child, who is emotionally immature because of overprotective parents, usually lacks independence and confidence and, therefore, tends to become inactive and to lose interest in his work and play. Disuse atrophy can be prevented by keeping muscles working to full capacity. This is especially important with regard to the respiratory musculature which is often found to be reduced in function by as much as 50 percent in later stages of the disease.[27]

The above considerations were an influence in the development of a music therapy program in a children's hospital in Canada. This hospital is an inpatient treatment facility with a school, hospital, and home for 48 children crippled by the conditions of muscular dystrophy, cerebral palsy, paraplegia, and other less common disorders. This report is concerned mainly with the dystrophic group consisting of nine boys with muscular dystrophy and two girls with conditions similar in effect.

Aims and Objectives

The music therapy program was based on the following aims and objectives: to reduce the child's isolation through group participation or through activities giving at least a sense of group participation; to provide the child with opportunities to ventilate aggressive feelings and impulses; to help the child develop his latent potentialities and to broaden his creative experiences; and to promote function wherever possible for the prevention of disuse atrophy.

The program included group musical activities that would help the patients establish more active and positive relationships with peers, family, and friends. Music activities also were planned to help the patients gain recognition of their residual strengths, talents, and capacities, and thereby to distract them from preoccupation with their deficiencies. Meaningful activities were used to stimulate broader interests.

Activities and Procedures

The dystrophic children were integrated with the other children in all of the music activities except Melodica playing, which was specifically designed for them. They were able to function successfully at their own level of achievement, along with the other children, in activities such as drum playing, operetta performance, and wheelchair dancing. The group integration did not seem to detract from the positive benefits they were expected to derive from these last three activities.

Melodica Playing. Respiratory difficulties are common, critical, and often fatal to dystrophic children. Blowing exercise is frequently prescribed for them with the hope that it will help them to maintain function of the respiratory muscles. The musical instrument that seems best suited to this purpose is the "Hohner Soprano Melodica." This is a wind instrument having a piano-like keyboard rather than holes, as does the recorder. Dystrophic patients, who would be unable to cover the recorder holes (properly) because of weak fingers, can easily manipulate this keyboard.

Although a note-reading approach can be used with the Melodica, it was not used with the dystrophic children because of their generally low achievement levels. Use of the number system was found to be a satisfactory substitute. In accord with this system, the notes within the octave were identified with numbers ranging from one to seven, accidental marks were placed directly in front of the numbers concerned, and a change of color was used to designate a change of pitch level for the octave itself. The children learned to read their songs notated in this fashion on large cards with large symbols for easy viewing.

Special precautions had to be taken with these children because of their low muscular endurance. In order to avoid fatigue from holding the Melodica, a pillow was placed on the knee of the child as a prop for the keyboard portion of the instrument. Care also was taken to have alternating periods of blowing and resting at five-minute intervals.

Initially, each child played the Melodica as a solo instrument. Later, he was admitted to a "Melodica Band" which was "held together" by means of piano accompaniment.

The ensemble set-up served to enhance individual accomplishment and afforded opportunity for group experience in a cooperative endeavor.

Drum Activities. The major emotional problems of dystrophic children are made evident by aggression and hostility. Yet, these children ". . . are denied a large part of the muscular release for these impulses which are available to the nondystrophic children. . . . Two major ways seem open to them: an increase of expressed verbal hostility or withdrawal from the outside world to fantasy life, increased passivity and dependency with repression of aggression."[28]

Because these tendencies were evident in some of the children discussed in this paper, it seemed necessary to provide them with opportunities for release of emotional tension. A "rock-and-roll" drum band was formed. Since these children had little use of either their forearms or their hands, drumsticks were given to all, with the exception of one very weak lad who had to play a brush (percussion type) on a small tambourine perched on his knee. Tall barrel drums were propped into positions that made it possible for them to be played. Piano accompaniment was used to keep the group together. At first, the beating of the drums was loud and aggressive. After a few minutes, it became more subdued. Use of music that was contemporary for their peer group seemed to erase feelings of isolation from the outside teen-age world.

Music and Drama. Operetta form, which provides music, dance, drama, art, costumes, and make-up, proved to be an admirably suitable vehicle for the expression of creative ideas by the dystrophic children. Roles were adapted and assigned according to individual physical and emotional needs. The projects were designed so that each child, no matter how handicapped, could make some contribution. This particular type of programming was found to be more successful than anything else attempted. The emphasis it placed on their vocal inflection and miming seemed to compensate for their lack of mobility.

Wheelchair Dancing. (The types of wheelchair dancing described here are for immobile groups only and do not apply to paraplegics who can normally propel their own wheelchairs.) One form of wheelchair dancing (best suited to the more withdrawn children) was accomplished with the aid of two volunteers. One volunteer stood in back of the patient and guided movement of the patient's chair by pushing; the other faced the patient and held his hands. The patient's initial contribution consisted in permitting his hands to be held and in focusing his attention on the person in front of him. He then was encouraged to lead movement of their joined hands and to move rhythmically with his body as much as possible. After several repetitions of these sessions, most of the children gained facility in directing where and how they wished to be moved.

Occasionally, the volunteer help was limited to that of one person. This necessitated pulling the chair of the patient while facing him. Various dances were accomplished in this manner. The "twist" was danced by merely pushing the chair from side to side with the rhythm of the music. The "apple dance" was highly popular. An apple was placed between the foreheads of the patient and the volunteer (leaning toward the patient), and the chair was pushed around the room until the apple fell. This was an excellent dance for promoting patient involvement. Folk dancing also was accomplished with the help of only one volunteer, who was able to stand in back of the chair and push, because the patient was facing other participants in the activity.

The 11 patients that were included in the above-mentioned activities ranged in age from 8 to 15 years. All were in wheelchairs, and only three had sufficient strength to wheel their own chairs. The program that was developed for these dystrophic children was both creative and recreative. The major activities were infused with musical adventure and appeared to involve successfully the children's interest. The more subtle effects of the program are expressed best in a statement of the hospital superintendent:

> In watching the proceedings of the program through the years, I was struck with the change it wrought in the personalities of our boys and girls. From a state of dull apathy that existed before the inauguration of the program they blossomed into lively rounded-out beings, full of ready interest, initiative, and joy.
>
> The happiest vehicles of expression were those associated with music. Music seemed to release them emotionally into the freshness of their natural youth-hood. It was of interest to note the abandon produced by the exhilaration of the musical experiences, and the markedly beneficial effect on their physical conditions.[29]

Music Therapy for Aphasia, Cleft Palate, and Other Speech Disorders

Sister M. Josepha, O.S.F.

Aphasia

The term "aphasia" is commonly applied to the loss of speech that often follows a brain injury caused by an accident, or some other condition such as a stroke or tumor.[30] This loss of speech is merely part of a complex language disorder that is characterized by an impairment of any or all of the communicative processes, of which speech, reading, listening, and writing are but a few.[31] Although aphasia has been the subject of controversy for several decades, it currently is accepted as consisting of two broad types: the motor or expressive type which in early studies was referred to as aphemia, and the sensory or receptive type which has been known as word deafness.[32]

The young aphasic child who has not learned to speak and to use language symbols in general has not developed behaviors related to symbol usage. The problem in dealing with him is one of special training to compensate for his atypical development. The normal adult, however, has usually learned to speak, read, write, and otherwise use language symbols. In contrast to the atypical development of the child, the adult aphasic is characterized by modifications of behavior. The problem in dealing with him is mainly one of rehabilitation.[33]

Values of Music. Although literature concerning the use of music with aphasia is sparse, the few articles and clinical reports on the subject do credit music with having therapeutic value for aphasic persons in several ways: (1) as an intervening wedge in communication; (2) as a means of increasing propositional speech; (3) as an indirect influence on speech improvement; and (4) as an emotional outlet and a means of experiencing feelingful relationships with others.

Palmer[34] refers to the use of music as an intervening wedge in the so-called congenital or developmental aphasias. He cites cases handled through an extensive home program in which the parents are advised, along with other items in the program, to expose their child to music constantly. After three months of this routine, the child is reexamined, and it is not uncommon for him to begin to talk toward the latter part of the three-month period, even though he may have shown little or no linguistic comprehension and had uttered no meaningful word prior to treatment. Palmer gives another example, that of a precociously developed child of 18 months who had suffered severe encephalitis and was left without comprehension or speech. When either of the parents would sing a song the child had learned before illness, "he would immediately start to sing it, quietly, with good diction, and with every indication of understanding."[35] Some language ability was developed in this child, apparently through the influence of his musical participation.

In some cases of adult aphasia, melodic patterns have been used to bring about an increase in elemental units of propositional speech. According to Palmer,[36] this approach is used best with the aphasic who does not have an actual language loss, but whose speech shows considerable limitation in those elements subserving general meaning--the reflex melodic, rhythmic, and accentual functions of language. When this approach is used with children having severe conditions, attention is given to meaningful intonations rather than words.

It is difficult to determine the degree to which music therapy contributes to the improvement of speech. Goodglass[37] recognizes music as having an indirect influence on speech in ordinary conversation, because it provides a basis for relationship with other patients. Klingler and Peter[38] also consider its influence to be indirect, a source of motivation for speech through successful accomplishment. They noticed that several persons with little or no speech appeared to lack motivation because of past failures in speech attempts. These patients frequently produced their first words while trying to sing along with other patients. This success seemed to contribute towards a more positive outlook and better motivation in other therapies.

The use of music as an emotional outlet is not new. The ability to gain emotional gratification from musical experience, and particularly from repeating familiar musical experiences, is a type of music appreciation available even to the aphasic. Goodglass[39] claims that in cases of aphasia where a part of the brain that is essential for speech has been injured, it is very common to find some preservation of the ability to appreciate music and, to some degree, to sing. He maintains that there are many patients who have completely lost the power to speak effectively, and yet have retained an ability to sing. The patient who has a well-preserved ability to sing usually finds enormous satisfaction in singing. In addition, the relationship he gets by joining musically with other people "is a much more immediately emotionally involving one than one that has to be filtered through speech and the conventions of polite social conversation."[40] Here, music can be said to act as an effective shortcut to the feelings of the patient.

Research Literature. No experimental research studies related specifically to the use of music for aphasia were found in available publications. The articles of Palmer, Goodglass, Klingler, and Peter describe results of the effects music seems to have had on congenital and adult aphasia, but their reports are observational.

Goodglass[41] presents rather clear evidence of a physiological condition underlying the dissociation of musical performance from language. His findings describe postmortem conditions of the brain of a patient who had manifested this phenomenon of dissociation, and who had died while at the hospital. They are significant in that they show preservation of the structure known as Broca's area and preservation of a small island of tissue near the front tip of the temporal lobe. According to Goodglass, this preservation of the anterior portion of the temporal lobe nearly coincides with that found in earlier cases in which musical abilities have been isolated by brain injury.

Klingler and Peter[42] describe a program in which singing was used as a therapeutic adjunct in the treatment of the aphasic. They report techniques that not only had proved effective in the past, but which also held true in their own experience. These techniques can be summarized as follows: (1) use of a tempo that is slower than normal, but fast enough to afford some challenge; (2) presentation of good sound patterns by means of the therapist's own clear enunciation of words; (3) use of songs with few words at a fairly regular rhythm; and (4) some reminder of the words in the form of visual reinforcement.

Implications for Music Therapy. The general objectives of music therapy for aphasia need not differ from those of other therapies. Music can be used as a positive influence in the special training of the aphasic child and as a means of rehabilitation for the aphasic adult. Music has values for both types of patients in improvement of communication speech. Music can be, for the child, meaningful intonation that contributes to the development of fundamental speech communication rather than isolated verbalization of vowels and consonants. The dynamics of melodic patterns, in turn, can influence the development of propositional speech in the adult. Finally, a rich musical background for the child can facilitate the special training that is necessary to compensate for his atypical development, while active participation on the part of the aphasic adult can lead to his own rehabilitation.

One of the most important aspects of adult rehabilitation is social. Many aphasic patients essentially are cut off from useful communication with other people and, therefore, have much need for emotional outlets and positive relationships with others.

Singing is the predominant music activity used with aphasics, although a complete musical approach also might include activities such as whistling, exercise in tone matching, inflection, volume control, and lip and tongue exercises.

Music therapy can be used to help the aphasic person achieve an optimal role within the limits of his physical and intellectual capacity. With the medium of music, the therapist can bring about an increase in morale and provide new interests for the patient. The music therapist, in the words of Goodglass, ". . . can make, essentially, the difference between a patient who cannot be reached, is not interested in staying in the treatment situation and goes home, or goes to a nursing home to vegetate, and one who is an interesting and happy addition to the hospital or to his home."[43]

Cleft Palate

"Cleft palate" is a term ordinarily used with reference to any of the several types of facial cleft. A clear picture of the possible variations in cleft palate and/or cleft lip is presented in the following summary:

> The cleft may appear as a complete or partial opening of the bones of the hard palate, the bones of the face that hold the upper teeth, the tissues of the roof of the mouth, the muscles of the soft palate, the upper lip, and the floor, bones, or septum of the nose. There may be a simple cleft of the lip alone (harelip); a simple cleft of the palate; or a complete cleft through the palate, lip, and nose; or any degree or combination of these clefts. A severe cleft may include a double cleft of the lip. Sometimes there is only a slight malformation such as a small cleft in the soft palate or perhaps only a shortening of the soft palate.[44]

Primary concern in therapy for the child with cleft palate involves surgical repair of the cleft lip and surgery or prosthesis for the palate. Associated with this basic problem of physical repair are other areas of concern such as prevention of dental caries and promotion of oral hygiene, reduction of the frequency of respiratory infections, prevention of ear infections, promotion of psychological and emotional adjustment, and speech training that will lead to adequate speech habilitation.[45]

It is in the area of speech habilitation that music has been used with cleft palate children. Although recent years have witnessed progress in speech habilitation programs for these children, published articles and research describing the use of music are practically nil. Therefore, music therapy for cleft palate children is based predominantly on current practices in music therapy and their relationship both to already-established principles in the field of speech therapy and to continuing research developments.

Music Therapy in Speech Habilitation of Cleft Palate Children

Donald E. Michel

In recent years, considerable progress has been made in habilitation techniques for cleft palate, speech-handicapped children. This paper describes music therapy techniques used in four, summer, speech therapy programs for cleft palate children.

The residential programs were based upon the idea that a concentrated period of work with the "whole child" will produce lasting improvement in speech. There was much concentrated, individual speech therapy, but there also were activities such as music, art, drama, and recreation. These activities were focused upon the speech therapy goals for the children.

In preparation for the first summer clinic (1960), a search of the literature was made, but little information was found concerning music therapy applied to this specific disorder. Considerable experience had been reported in the use of music as a tool in speech therapy in general, but not for cleft palates. Kaplan stated four purposes for music with speech therapy: (1) to provide a form of therapy, (2) to provide recreation, (3) to give the child something to take back with him to his home community, and (4) to give the child some skill in a new modality--music--to build his self-confidence.[46] Since Kaplan reported success in the use of music toward such goals for speech handicapped children, some of whom had cleft palates, his goals were adopted for the residential speech therapy program. More specifically, music therapy goals were to provide new listening experiences for the children, to utilize music activities in speech therapy exercises, and to utilize the socializing effects of musical group efforts toward general as well as specific speech and personality needs of the children.[47]

The two basic methods employed during the first summer's clinic were group singing and the learning of "pre-band" instruments. Pre-band instruments were used for teaching the children to expel air through the mouth rather than through the nasal passages, which is a common problem in cleft palate speech. Positive results of the socializing influence of group singing were obtained. There was evidence of better cooperation, less shyness, and development of group identification among the children. Carry-over value was observed in the acquisition of some group singing skill and the learning of typical songs. The group singing not only provided socializing benefits, but also provided a new means for drill on correct speech sounds. The fact is notable that most of the children wanted to purchase the flutophones they had been loaned so that they might take them home and play them. The music activity resulted in some group support for individual efforts when individuals or pairs of children performed in front of the group.

During the second clinic, in addition to group singing, individual music sessions were organized for the children. They learned how to blow wind instruments and individually studied singing. Improved materials were used, e.g., recordings which were specifically designed for speech correction.[48] Two therapists, working together with the group, were more effective than one in providing leadership and individual attention. A tape recorder proved useful as a means of stimulating interest, providing on-the-spot evaluation by the children, and evaluating progress. The children quickly learned to accept and use the tape recorder, even for recording individual performances. Individual recordings served as a basis for later evaluation of speech patterns. It was concluded that:

> Not only were the children able to reap the benefits of musical participation in terms of expanded perception of sounds in general--pitch, range, vocal quality, etc.--through singing and other forms of music, but also, many of them were enabled to learn concepts of correct speech articulation through . . . music. . . . The learning of improved social skills . . . and the development of increased self-confidence through individual and group musical accomplishments were . . . benefits realized by many children.[49]

The third clinic achieved further refinements in procedures and evaluation. Besides regular sessions conducted with the children in a group, programmed learning techniques were used for working with individual children on a song designed for improved articulation.

Musicality tests, pitch matching, and general assessment of musical potential of these children seemed to show that they were considerably below average in musical experiences and aptitude. Considering their affliction, it was not surprising that they should have below average experience in music performance. In fact, it was apparent that most of the children were from "culturally deprived" areas, which probably accounted in part for their low music potential.

A particular effort also was made to stimulate spontaneous speech. Students from a summer music camp came into the music sessions to demonstrate and talk about their instruments. The cleft palate children were forced to make themselves clearly understood in asking questions of the campers. An important discovery for the cleft palate children was made when one of the music campers, who played the trombone, turned out to have a cleft palate himself.

Results of the contribution of music therapy were observed not only in the enthusiasm of the children for their work in music, but also in some specific speech improvements that could be attributed more directly to music therapy than any other single activity.

A brief experiment was made in the use of an inexpensive toy musical instrument, the kazoo, which might be highly useful in speech correction exercises for cleft palate children.

> Not only were the subjects required to minimize nasal escape (in playing the kazoo--an instrument through which one hums or sings), but they were also required to produce the various pitches of several songs without relying on a mechanical aid such as a piano keyboard . . .[50]

Refinements developed in music therapy techniques during the 1963 clinic centered on work with individual children, although the group sessions also continued. A case study demonstrates how individual music therapy can operate.

> Case 1. The patient was a ten-year-old male who spoke with much nasality, rushed his speech, and was difficult to understand. In addition, he displayed overt behavioral problems, including refusal to cooperate, aggressiveness toward other children, and a general tendency toward destructiveness. He was frequently uncooperative in speech therapy sessions and often was a distracting influence in any group activity. He seemed to show, as observed by staff, a severe cultural deprivation and a low average learning ability. He was easily distracted.
>
> The treatment aims of music therapy were improvement in articulation and breath stream problems, increase in attention span, assistance toward more cooperative behavior, learning of skills which might lead to better self-concept and social acceptance by peers, provision of open-throat exercises with free tones to reduce nasality, assistance in improving sense of timing and rhythm, and ear training for monitoring his own speech and making better quality discriminations of all sounds.

> The approach was to take a personal interest in the patient, accepting him as he was, and trying to build a bridge of common experience and feeling through music. Fifteen daily sessions were scheduled over a period of three weeks, and many other sessions were scheduled outside the regular daily activity times.
>
> After the first several sessions, the patient's attention span increased as he consistently worked on the flutophone. By the end of the clinic, he had memorized the first verse of "Old Folks at Home" and sang it proudly, distinctly, and in a serious manner. He concentrated daily on sustained breath stream control with long, steady tones on the flutophone, and by the end of the clinic, he had attained much more control than he had had on the first day. In addition, the patient learned to play a simple tune on the piano, a few chords on the autoharp which he could use in accompanying singing of the group, and he explored the accordian and the tape recorder.
>
> The patient made good progress towards more cooperative behavior, and his general attitude had greatly improved, according to observations by the staff. He became less aggressive and even helped the other children, trying to get them to cooperate in group activities. He gained enough self-confidence to move from refusing to sing at first to being willing to sing a solo at the final program of the clinic.[51]

Music therapy has been found specifically helpful in cleft palate disorders as a means of helping children to improve sound quality discriminations, to gain better control of the breath stream, to learn and practice specific articulation exercises, and to gain a sense of self-confidence through accomplishment. Music also provides a mode of acceptable outlet of feelings of frustration, hostility, and aggression. In view of the apparent success of music therapy procedures for this type of speech disorder, further research should be done, both in underlying theory and concepts and in applied methodology.

Relation of Current Practices to Principles of Speech Therapy

Sister M. Josepha, O.S.F.

The specific music therapy techniques described by Michel relate well to the findings of research in speech therapy. In a review of the literature in this field, McDonald and Baker[52] point out that speech correctionists have generally recognized three major speech production problems in the cleft palate patient: hypernasality, nasal emission, and misarticulation. They proceed to clarify these problems by presenting a summary of the various theories about the nature of cleft palate speech that have been developed through research, observation, and clinical experience.

Hypernasality, according to many writers, is the result of failure to effect a velopharyngeal closure. McDonald and Baker list various interpretations of this theory according to such authorities as West, Kennedy, and Carr; Nusbaum, Foley, and Wells; Kanter, Harrington, and others. This is followed by a brief summary of the findings of

Russell, Williamson, Hixon, and Kelly, wherein nasality seems to be associated with conditions other than the velopharyngeal closure, such as throat and mouth tension, small mouth openings, and cavity relationships. McDonald and Baker conclude with their own hypothesis concerning hypernasality:

> There is a critical point in the degree of closure of the nasopharynx. It is at this critical point that a characteristic balance or ratio is established between oral and nasal resonance. If this critical point is not reached, "nasality" will occur. . . . We further hypothesize that at least some of the cleft palate patient's "nasality" results from his persistent habit of elevating the mandible and the dorsum of the tongue during speech.[53]

Nasal emission, in the opinion of McDonald and Baker, has not always been clearly distinguished from nasality. Findings of the only available research--that of Nusbaum, Foley, and Wells--indicate that vowel sounds, free from nasality, may be made even when air is escaping through the nose. The concluding hypothesis associates nasal emission principally with mandibular and lingual position and movement, and only secondarily to: "(1) the degree of patency of the nasopharyngeal port; (2) the degree of constriction of the pharynx; and (3) the habitual use of excessive air pressure which the cleft palate patient appears to develop to compensate for his 'leak.'"[54]

The problem of misarticulation has been attributed to various conditions such as improper articulatory adjustments of the tongue caused by anomaly in structure or developmental function, general speech retardation, or hearing loss. McDonald and Baker[55] conclude with their own hypothesis that the articulatory mutilations of the cleft palate patient are the result of his habit of talking with the jaw elevated and the dorsum of the tongue held high in the back of the mouth. This, in turn, makes it impossible for the speaker to make free use of the tip of the tongue, which use is necessary for the accurate production of many speech sounds.

The music therapy techniques described by Michel were directed toward the solution of these three problems. Attempts were made to correct hypernasality through singing, the playing of the flutophone and kazoo, and the use of open throat exercises with free tones. Treatment was directed toward the reduction of nasal emission through the playing of these instruments, which served both to facilitate and motivate correct breath stream direction. Correction of misarticulation was approached through the use of selected articulation exercises in song.

The playing of simple wind instruments comes under the category of "blowing" in speech therapy techniques for cleft palate conditions. Speech correctionists formerly placed great reliance on blowing exercises, which consisted of blowing up balloons and puffing at bits of paper and cotton as well as tooting on whistles and playing harmonicas. Although these techniques are still in use, they are no longer treated with the same emphasis.[56]

McDonald and Baker[57] point out several commonly held objections to the use of blowing, especially as a routine exercise. These are: (1) exclusive concentration on velopharyngeal closure; (2) difference in types of movement used in blowing and in speaking; (3) possible development of undesirable accessory movements; (4) use of too much air pressure; (5) psychological problems created by failure and frustration in initial blowing exercises; and (6) observed development of nearly normal speech, in some cleft palate patients, without the use of blowing exercises.

The music therapy techniques described seem to have avoided some of these objections. Exclusive concentration on velopharyngeal closure seems to have been unlikely, inasmuch as the activities included group singing as well as the playing of "pre-band" instruments. The patient's monitoring of his own speech was encouraged through ear training for correct sound discrimination. This is in accord with recent evidence which seems to show that nasal emission of air during speech can be effectively reduced by concentrating clinical attention "on what is heard rather than on the portal of emission."[58] Because a person does not speak as he "blows," more acceptable therapy is also concerned with directing the flow of air through the mouth and throat as resonators.[59] This approach was effected by playing the kazoo, an instrument through which one hums. Use of too much air pressure was avoided by making use of actual instruments instead of simple blowing. Over-blowing on instruments causes poor tone quality. Therefore, playing of these instruments can facilitate control of air pressure by directing attention to the sound being produced rather than to the blowing process itself.

Present-day attitude toward the use of blowing exercises with the cleft palate patient is not as negative as it might first seem. McDonald and Baker[60] suggest that blowing exercises can and should be used under the following conditions: (1) presence of little or no perceptible movement in the velum or the pharyngeal walls--blowing exercises might initiate such movement; (2) modifications of mandibular and lingual habits--blowing exercises can increase mobility of the velopharyngeal structures; and (3) emotional resistance to speech therapy--blowing exercises, as a nonspeech activity, may serve as motivation. Although the report on music therapy techniques used at the summer clinic does not point out specific relation of the activities to these three conditions, the relationship is obvious, especially to conditions "one" and "three." The use of open-throat exercises and the playing of simple wind instruments seem to coincide with condition number "two." In all, there seems to be a definite correlation of current music therapy techniques for conditions of cleft palate with the principles of speech therapy in this same area.

Speech defects are frequently divided into the four categories of articulation, phonation, rhythm, and language dysfunction. A single speech-defective person may exhibit deficiencies in two or more of these categories at the same time. For example: brain-damaged adults often manifest impairment of language function as well as of articulation; most cleft palate children have defects of both articulation and voice; and a cerebral palsied child may have defects of language delay, articulation, and voice.[61]

This overlapping of the same basic speech defects in different categories of speech-defective individuals points up the need of planning music therapy techniques in light of the speech defect itself. Therefore, it seems advisable to place here a report on the use of music with all categories of speech-defective persons, even though the disability areas of cleft palate and cerebral palsy are given separate consideration in other sections of this résumé.

Music Therapy for Severe Speech Disorders

Kay Ewer Wells
Neal Helmus

A diagnostic and treatment center for physically handicapped children in the north central United States serves four general categories of patients: congenital defects; delayed development; accidents; and paralyzing illnesses. Emphasis is on rehabilitation. During a period of two years, this hospital developed a program of coordinated music and speech therapy with patients having aphasia, cleft palate, voice problems, delayed speech, cerebral palsy, and articulation disorders. This coordinated program attempted to develop techniques that would be workable according to these criteria: methods adaptable for use by the speech or music therapist; specialized music therapy techniques to supplement speech therapy; techniques suited to different age levels; and techniques that could adhere to medical orders for muscle reeducation, approximating the goals of physical and occupational therapy. The following techniques are the result of this coordinated program.

PROBLEM I: Lip dysfunction: conditions of cleft lip, cerebral palsy, and apraxia; involves inadequate range of motion, speed, and strength of muscle movements.

1. Harmonica: playing of scales and simple tunes. Requires minimal motor control of lip muscles; no tongue movement at this stage; range of motion and strength are involved; no speed.
2. Flutophone: requires considerably more range of motion and strength; used after enough muscle development to play harmonica easily.
3. Whistling: requires finest motor control with maximum range of motion and strength.
4. Singing: use of songs with words containing letters, "p, b, m," initially (least difficult), medially (most difficult), and in the final position; speech exercises, "p-p-p" set to music (can be finely graded as to speed and strength) primarily for speed development.

PROBLEM II: Tongue: conditions of cerebral palsy, cleft palate, apraxia, delayed speech, and articulation; involves inadequate range of motion, etc.

1. Singing: use of songs with words containing sounds, "t, d, l, k, g, r, s, and n," initially, medially, and in final position. These songs were composed to suit particular needs for speed, strength, or range of motion, for example: "Tom Tinker told Tillie Atkins terrible tales."
2. Harmonica: for older patient; calls for speed and strength for accurate placement of tongue.

PROBLEM III: Palate: conditions of cleft palate, cerebral palsy, and tonsillectomy; involves inadequate range of motion, etc.

1. Harmonica: requires palate-pharyngeal closure; range of motion and speed of muscle movements stimulated.
2. Flutophone: same as above but usable for younger child.
3. Singing: can be used with a still younger (than in 2 above) group; insert "p, ch, and sh" sounds into words, especially in the initial position.
4. Trumpet: for the older patient with adequate breath capacity.
5. Humming: expressly for developing velopharyngeal closure and reducing nasal emission; effective.

The first four of these activities also include emphasis on velopharyngeal closure, eliminating nasal emission of air.

PROBLEM IV: Pitch: conditions of aphasia, voice, and cerebral palsy.

1. Tone matching: for all age groups; demands development of auditory discrimination; therapist matches tone the patient can produce; use of piano for matching; increase range by moving to adjacent tones; immediate transfer to speech by singing-saying greetings using these tones; match sentence inflection to its exaggerated musical counterpart; when three tones are mastered, start singing nursery rhymes (Hot Cross Buns); (even older patients do this willingly--with much hilarity).

   Also, high versus low tones--identifying and matching without help from the therapist; emphasis throughout on using the ears and immediate transference to speech; most effective in daily, or twice daily, sessions of 15 minutes.

PROBLEM V: Loudness or Volume: conditions of cerebral palsy, cleft palate, voice, apraxia, and emotional disturbance.

1. Singing: uses all of the techniques listed under breath control (see Problem VI); songs with dramatic content are good; with the younger child use songs such as "Pop Goes the Weasel"; place emphasis on accent and rhythm.

2. Rhythm instruments: use rhythm instruments with singing; imitate sounds of instruments; promote a free and spontaneous atmosphere.

3. Oscilloscope: use visually to observe and measure loudness.

PROBLEM VI: Breath control: conditions of cerebral palsy, cleft palate, and apraxia.

1. Singing: sustaining tones; expanding number of words and phrases sung on one breath; use of speech exercises using labial and tongue sounds; put to music for added interest.

2. Rhythmic exercises: use sung exercises on nonsense syllables emphasizing rhythm; use rhythm instruments with them for added appeal.

3. Wind instruments: same graded procedure as for singing.

PROBLEM VII: Loss of speech: condition of aphasia.

1. Singing: use of childhood songs to aid automatic word recall; gives confidence and proves the patient able to produce speech; use of "sol-fa" syllables is especially effective.

2. Whistling: as described in Problem I.

3. Pitch techniques: as described in Problem IV.

4. Loudness techniques: as described in Problem V. Both pitch and loudness techniques are recommended if the aphasic patient has lost normal intonation and inflection.

5. Lip and tongue exercises: necessary if the aphasic patient as apraxia, or loss of oral-facial muscle control.

Most of the speech patients in this hospital had emotional problems arising from, or underlying, their speech problem. The total treatment plan included consideration of these emotional factors as well as application of the techniques outlined above. The following two brief case histories illustrate this approach.

Case 1. M was a four-year-old girl whose speech was unintelligible to everyone except her mother. There was no apparent cause for this, and M had developed a fear of speaking in front of anyone--adults in particular. In both speech and music therapy, attention first was focused on the labial sounds, "p, b, m"; songs were composed for this purpose. Group music also was included, both for the socialization and the mutual support of the members of the group, all of whom had speech disorders. Therapy proceeded from the use of simple songs using "p, b, m," to the inclusion of sounds made by the tongue. Songs and exercises were designed to give added volume. Much dramatization and many rhythmic activities also were used.

M gradually mastered these sounds, and emphasis was placed on developing a repertoire of nursery rhymes and similar songs. As a culminating activity, a tape recording of her singing and playing of rhythm instruments was sent to her nursery-school class. Subsequently, it was presented as a TV show with M as the "star." Therapy was discontinued once she had developed intelligible speech and had managed to overcome most of her fear of speaking.

Case 2. H was 15 years old. His speech problem consisted of unintelligibility and nasal emission. He had inadequate lip, tongue, and palate control. All of this, plus his facial appearance, was complicated by deep-seated feelings of inferiority. Lip exercises and auditory discrimination were the first points of emphasis in his speech and music therapy. Stress was placed on sounds made by the lip and tongue. The harmonica was introduced to aid in reduction of nasal emission and the increase of lip strength and tongue control. Singing was used also as a means of lessening nasal emission and for the development of better breath control. Next, all blowing and lip exercises were intensified to increase the speed and strength of muscle response. At this point, emphasis was shifted again to sounds made in the back of the mouth. The therapists demonstrated how the back of the tongue should be raised against the palate to reduce the use of glottal stoppage in speech. Increase of muscle strength was obtained through a gradual intensification of the blowing and lip exercises.

H tended to improve in therapy but to revert to old patterns when away from therapy. Therefore, strong emphasis was placed on transference of progress made in the therapy situation to other situations. All the departments he attended were informed of his work in speech and music therapy. This tactic contributed greatly to his progress. As his sound vocabulary increased, his self-confidence also increased. It was further enhanced by the praise he received from others for the proficiency he had developed on the harmonica. He was able to gain lip, tongue, and palate control sufficient for adequate speech. At this point, his therapy was discontinued.

In the two case histories described, treatment was directed simultaneously toward correction of the speech disorder and resolution of the accompanying emotional problem. Initial attention was given to lip and tongue exercises which were motivated through song and supplemented by other musical and rhythmic activities. Although the basic techniques were the same, they were easily adapted to the different age levels through appropriate selection of materials. In both cases, the resolution of emotional conflict was promoted through guided, successful accomplishment in supplementary music activities as well as in speech performance.

Music Therapy for the Cerebral Palsied Child

Erwin H. Schneider

The largest single group of physically handicapped children in our society today are those suffering from cerebral palsy. Because of the growing birth rate, the number of cases will increase. Out of every thousand live births, approximately one case of cerebral palsy will be found.[62] There are no known preventive measures or cures for this disorder.

Cerebral palsied children (also referred to as brain-damaged children, or by differential diagnosis as "athetoid," "spastic," "ataxic") generally have neuromotor impairment, and disturbances in psychological function and emotional control. They specifically exhibit poor motor control, general distractibility, hyperactivity, irritability, and disinhibition. The degree of total disability in any one child usually shows great variability from day to day and is believed to be caused by general hypersensitivity and affective tone at the time.

These children present a challenge to the fields of habilitation therapy and special education. This is true not only because of an increase in the number of such handicapped children, but also because public acceptance and understanding of this condition has been taking place. Clinical and educational opportunities are being demanded for these children because medical, psychiatric, and educational workers have provided information and techniques which have made possible new therapeutic and educational opportunities.

Values of Music and Musical Activities

Articles and clinical reports indicate that music and musical activities have a beneficial influence on the tension level, distractibility, hypersensitivity, and affective tone of many cerebral palsied children. Snow and Field,[63] Rogers and Thomas,[64] Frampton and Rowell,[65] Reeves,[66] Bruner,[67] and Cass[68] indicate that music and musical activities help to effect needed relaxation. Reeves[69] further indicates that music is a help in attracting the attention and in increasing the concentration span. Carlson[70] points out that music can serve as an agent which minimizes the effects of undesirable environmental stimuli. Lesak[71] and Bruner[72] suggest that music stimulates, or motivates, activity. Bruner[73] also believes that music provides emotional release for cerebral palsied children. Fraser[74] and Doll[75] point out that listening to music with one or more persons gives a feeling of belonging and encourages positive interpersonal relationships.

Music and musical activities also are believed to have beneficial effects on the motor control of cerebral palsied children. Weigl[76] reports that musical activities have proved effective in promoting the initially necessary relaxation and then stimulating activity, strengthening muscles, and improving motor coordination. Fraser mentions that listening to music ". . . encourages body activities without requiring any verbal participation."[77] Doll, in reporting on dance activities for the cerebral palsied, suggests that children of this type ". . . can sometimes unconsciously master patterns of movement which might involve months of self-defeating efforts in physiotherapy."[78] Boyle[79] reports that control of motion (arms, fingers) can be obtained through rhythmic exercises on the piano.

Singing activities can be of value in speech therapy programs for cerebral palsied children. Doll reports that "the sounds of speech therapy can be as readily learned, and much more eagerly practiced to tunes . . ."[80] Weigl[81] indicates that better breath and vocal control, easier phonation, and tone prolongation are possible through singing activities. Westlake[82] also emphasizes the value of practicing phonation and tone prolongation through use of jingles and easy songs in speech training with cerebral palsied children.

Some clinicians caution that relaxation is not necessarily achieved by all such children in musical activities. Palmer, after nearly 20 years of using music in therapy and training programs for cerebral palsied children, reported:

> (1) . . . all of the children with useful hearing get a great deal of socio-psychological support from these periods, which is extremely useful in helping them build toward a self-supporting, independent existence; (2) . . . while the literature and the usual reports from such musical periods conducted every day in the special educational classrooms state that relaxation is achieved during music appreciation /listening/ and participation, not all children with cerebral palsy are so benefited. Some relax not at all, and some are appreciably more tense or more discoordinated following such periods. The effect is transient and apparently not harmful in any permanent sense, unless the therapist, in believing music is a relaxant, uses this for relaxation in a child who proceeds in the opposite direction. We are of the opinion that this is a matter of the kind of cerebral palsy that a child has . . .[83]

Fraser stresses that music and musical activities be selected in terms of the individual child. She states, "brain-damaged children can be reached thru /sic/ music, but specific uses of music must be determined individually for each child."[84] The experimental work of Schneider[85] and Lathom[86] demonstrates that differential diagnosis of cerebral palsy may determine the kind of musical experiences for these children. They point out that the music used also seems to be a controlling factor in the value of any musical experience. These studies are reported in detail in the next section of this paper.

Research Literature

Research studies, particularly experimental ones, related to the use of music with cerebral palsied children are not plentiful. The complexity of the cerebral palsy condition, which makes experimental study difficult, probably accounts in part for the paucity of research reports. Studies which concern the use of music with cerebral palsied children are basically of two types: (1) those oriented toward determining the effects of music as a stimulus on the behavior of cerebral palsied individuals; and (2) those oriented toward determining the values of music and musical activities in achieving certain treatment or training objectives. The former studies provide the rationale, in many instances, for the specific applications of music in the therapy and/or training programs for cerebral palsied children. The latter studies are concerned primarily with actual therapeutic applications of music and musical activities.

Effects of Music.

The studies of Palmer and Zerbe, Schneider, Ditson, Lathom, and Staub were concerned with the effects of music on certain behavioral aspects of cerebral palsied individuals. Palmer and Zerbe[87] studied the effects of musical tones and rhythms, primarily those of the violin, on the tremor of a 21-year-old male showing symptoms of spastic paralysis and tension athetosis. The experimental method consisted of delivering to the subject a series of auditory stimuli that varied in rate and amplitude as the tremor of athetosis varied. It was possible to increase and control the severity, rate, and stability of the tremor by means of sound and visual stimuli. In a later report, Palmer[88] indicated that it was possible to demonstrate that different music had different effects on the tremor rate. Slow, calm music produced tremors at the lower limits of rate--about 65 per minute. Martial, vigorous music produced tremors as high as 100 per minute.

Schneider's[89] work was concerned with determining whether certain recorded music had any effect on the performance of cerebral palsied children, as observed and evaluated in the quantity and quality of their productive work, and in their overt behavioral manifestations while engaged in the performance of tasks which employed a psychomotor component. Ten cerebral palsied children. representing the spastic, athetoid, ataxic, and mixed type, who were patients in a cerebral palsy clinic and members of a special education class, were used as subjects.

The study was carried on for seven months. The musical recordings used were classified as (1) physically sedative, and (2) physically stimulative, music. Physically sedative music was defined as having flowing melodies, smooth rhythm, moderate tempos, smooth modulations, and the predominant use of string and woodwind instruments. Music classified as physically stimulative exhibited marked rhythms, fast tempos, staccato melodies, syncopated musical figures, and the predominant use of brass and percussive instruments. The experimental tasks included a pegboard activity and a "coloring" activity. The experimental design called for each subject to perform the selected tasks under a control condition of no music and two experimental conditions, (1) sedative and (2) stimulative music, during which performance previously designated aspects of behavior were noted and recorded.

Schneider concluded that recorded music did affect the quantity and quality of performance on the selected tasks for a majority of the subjects; that recorded music seemed to have some effect on various psychological processes of the subjects; and that the noted effects of music seemed to be dependent on the type of music used, the overall physical and mental condition of the subjects, and the type of cerebral palsy. Specifically, the physically sedative music seemed to effect relaxation in some children diagnosed as athetoids, while the physically stimulative music seemed to have similar effects on some children diagnosed as spastics. The responses were believed to be due primarily to the mood effects of the music. Tempo and rhythm as motivating and regulating forces also were believed to be of importance, particularly in physically stimulative music. The improvement in performance of the subjects may have been caused by increased ability in concentration.

The fact that not all of the subjects were affected by the recorded music was considered to be related to the degree of neuromotor and psychological impairment, the age, and the amount and kind of therapy received. It also could have been due to lack of sufficient musical experience. These factors thus appeared to be controlling interrelated variables which partially determined the degree to which music would or would not affect the behavior of such children. These findings seem to give support to Palmer's[90] notion that the effects of music are related to the types of cerebral palsy, and to Fraser's comment that ". . . music must be determined individually for each child . . ."[91] Fields[92] also emphasized that knowledge of the patient's injury and prognosis, as well as knowledge of the functional potential of music, is important in determining uses of music with cerebral palsied children.

Ditson[93] used moderate background music during regularly scheduled speech therapy sessions. Moderate background music was defined as music that was not exciting or stimulating. Twenty-one cerebral palsied children, ranging in age from 18 months to 4 years, were used as subjects. The background music was used in over 70 therapy sessions, and the effects of the music, in terms of participation and behavioral response, were recorded by the music therapist and the speech therapist. The McNemar test for significance of change revealed the following data for the periods in which music was used: (1) significant increase in the amount of participation in therapy activities; and (2) significant increase in the display of socially acceptable behavior. The marked improvement in the participation and behavioral attainments of the subjects led Ditson to suggest that background music may be useful in creating a positive atmosphere in therapy sessions for cerebral palsied children. Ditson drew five conclusions. (1) The use of background music serves as a stimulus for physical and verbal participation during speech therapy sessions. (2) The use of moderately stimulative and sedative music promotes a change in the behavior of cerebral palsied children. (3) The use of moderate background music promotes a conditioned response in the cerebral palsied child, thereby enabling him to enter the therapy session without fear. (4) The use of music promotes a marked increase in socially acceptable behavior. (5) The use of background music serves as a therapeutic tool in cerebral palsy treatment programs.

Lathom[94] investigated the effects of a musical environment on voluntary muscular control. Devices used included a stationary bicycle for determining degree of control in the lower extremities and a wall pulley for determining degree of control in the upper extremities. Ten subjects performed under conditions of "no music," "sedative music," and "stimulative music," for the purpose of determining whether there was a change in the amount of control under each condition. There were several conclusions. (1) Not all of the subjects were influenced to the same degree or in the same manner by the three experimental conditions. (2) The athetoid children exhibited better control in response to sedative music, and most of the children diagnosed as "spastic" seemed to benefit from stimulative music. (3) Some subjects reacted to the same music in a different manner on different days. (4) If music is to effect a beneficial response during activities that involve physical control, it would seem necessary to choose carefully the music that is observed to have a desirable effect on the individual.

This study gives additional support to the concept that the effects of music on specific behaviors of cerebral palsied children seem to be related to differential diagnosis and the music used, but that not all cerebral palsied children are affected in the same way by music--that other factors, such as the severity of the condition, age, physical condition, and amount and type of therapy, also may be controlling variables. This concept appears to be true particularly when the music used is extremely stimulative, or extremely sedative, and when relaxation or physical control is the behavior involved

Staub,[95] in a study using music as a relaxing agent, used eight adult cerebral palsied patients ranging in age from 16 to 26 years. She observed the degree of relaxation present during finger-painting activities when accompanied with music, the amount of relaxation present during finger-painting activities without music, and the degree of relaxation present during quiet listening to music. She reported that music helped to induce relaxation in the patients during the finger-painting and the listening activities. No indication was given as to the type of music used in the study. Personal observation and the reports of the subjects were used in determining the degree of relaxation present.

Therapeutic Applications. Fields[96] reported a three-year study on the use of music and musical activities in treatment that attempted to increase motor coordination in 28 severely disabled, brain-damaged patients. The patients ranged in age from 15 to 54 years and presented neurological symptoms of spasticity, athetosis, rigidity, ataxia, tremor, and associated speech, auditory, and visual defects. Psychological characteristics included distractibility, disassociation, perseveration, and reverse field tendencies. The treatment employed consisted of patient participation using simple rhythm instruments and piano keyboard activities. Measurable improvement was noted in both gross and fine motor coordination in 24 of the 28 patients. The improvement in motor coordination carried over into other activities. These findings were considered to be specifically significant with seven of the patients, because other therapy activities with these patients had either been terminated or confined to activities not related to those used in the experimentation. Fields concluded that "improvement in coordination among twenty-four of the twenty-eight patients treated suggest the value of music as an adjunct in the treatment for brain-damaged patients in the area of coordinated motion."[97]

A definitive case study by Glover,[98] utilizing a brain-injured child, was concerned with (1) developing an educational program of music for the subject with emphasis on piano instruction, and (2) determining whether the general mood of the subject could be influenced through music listening, rhythmic activities, and creative activities. Glover also was interested in determining whether music could serve to help the subject go to sleep, and whether any emotional reflections of the music were present in the subject's creative activities. The subject of the study was a six-year-old male whose normal behavior pattern was one of slight hyperactivity. Glover reported that music seemed to be a potent factor in influencing the subject's mood. This was demonstrated most effectively on the occasions when music was used as an inducement for sleep. The subject also appeared to be more quiet and attentive during his music lessons than at other times. And, as he played the piano, he demonstrated a spontaneous creativity in his playing and released many feelings through music. The subject's school teacher felt that his musical activities were an important aspect of his social adjustment. Glover's general conclusion from this study was that music seemed to offer, for this child, a means of sublimating tensions.

The foregoing account of research suggests certain implications for the use of music with cerebral palsied children. These implications can be considered as guidelines only, because the research reported did not investigate an adequate sampling of the cerebral palsy population. However, as guidelines, they provide direction and concepts for the therapist and the teacher who work with cerebral palsied children.

First, when music is to be used as a background stimulus for purposes of improvement in motor control or for purposes of relaxation, careful consideration should be given to the differential diagnosis of cerebral palsy. Careful observation should follow to determine whether the child is responding toward the therapeutic goal.

Second, the value of music as a background stimulus in group situations, in which various types of cerebral palsied children are found, would seem to be dependent on the range in degree of disability and the age of the children and the degree to which the music is stimulating. With some children, and for some activities, moderately sedative to moderately stimulative music might be valuable in establishing an atmosphere conducive to therapy or learning activities. Music used in this way should be presented just above the threshold of hearing in order not to distract or unduly stimulate. It may be impossible to establish a musical environment for any group of cerebral palsied children that will be of benefit to all of the children on any given day. Again, observation of the response of a group to the various types of music is necessary before planning widespread use of this medium in a group situation.

These two basic considerations are essential to the successful use of music or musical activities with cerebral palsied children. They indicate that the differential diagnosis of cerebral palsy may give a cue to the reactions of a child to various types of music, but that the possibility always exists that not all children so diagnosed will react in this way. Such evidence as is available, however, indicates that music therapy is valuable and worthwhile for cerebral palsied children.

Some Music Therapy Practices for the Child with Cerebral Palsy

John Bixler

The music therapist works in a double role in his efforts to help the child with cerebral palsy. He is both music educator and music therapist. As a music educator, he is filling the role of the public school music teacher and as such is interested in children who may some day be able to go to public schools. These children must be prepared to take part in a regular school music program. As a music educator, he is interested in the child's creative life at home and as a member of his social community. He may be dealing with many children who will be doing more listening and who will have less active participation than others at the same age. Thus, he also is interested in helping the child develop broad interests, both active and passive, in all phases of music.

One of the particular difficulties of the child with cerebral palsy is that of belonging to a group by reason of making a positive contribution to the group. As is the case with many physically handicapped children, the cerebral palsied child tends to live much of his life on a one-to-one basis with adults, be they parents, teachers, or therapists. This is necessitated by the nature of his handicap and by the extremes of function present in any group of physically handicapped children. Larsen's[99] study of the experiences of physically handicapped children clearly shows differences in socialization between these children and their nonhandicapped peers of like socio-economic status. The reasons for these differences are primarily those of mobility and communication, but in addition there are strong psychological factors, especially during adolescence, that inhibit good group relationships for the physically handicapped. This problem of group relationships presents a challenge to the music therapist, for music is a meaningful activity that can thrive in a group setting. White[100] points out the importance of group relationships in helping the child to form a clearer and more accurate picture of himself and the goals for his rehabilitation. This is particularly true of youngsters in their early teens, to whom group activities are an especially important part of life.

Case 1. P was a 14-year-old girl who had a diagnosis of chronic brain syndrome arising from brain trauma suffered in an automobile accident at the age of 12. She had a mild dysarthria, a slow walking pattern, and a tremor was present during any hand activity. She was referred to this facility (a hospital school for physically handicapped children) by a children's psychiatric clinic for observation under group conditions. She was unable to function in a public school setting. Her problems were listed as poor memory, resentment at "being stared at," and general negativism accompanied by refusal to accept the idea that she was different from her peer group and in need of special services.

Upon admission to the hospital school, she was placed with a music class of 12 intermediate age pupils having a variety of handicapping conditions, but normal intelligence. The goal was to use her reported "love for music" to help her to become a member of the group. In this way, it was hoped that her general attitude toward others and toward herself would undergo improvement. P made no attempt to fit into the music group. She refused a songbook and would not take an instrument of any kind. She was extremely negative and refused all requests. She did volunteer the information that she had played a clarinet during her grade school days and would like to play it again. However, her tremor was so great that she could not hold the instrument.

The basic approach was made through instrumental music where it was felt there would be the least threat to her security and where negative feelings could be released against an inanimate object. She was handed rhythm instruments without comment of any kind. At first, she tolerated these for only a short time and would not play. Within a week, it was noted that she no longer objected to the instruments and had begun to make a few movements in time to the music. Her objections then took the form of complaints that she was not able to read music as the others around her could. When asked if she would like to learn to read her own part, she said she probably would, "sometime." A significant gain was noted in her desire to play the louder, more aggressive instruments, such as the drum, and to take a few individual lessons in rhythm-reading. Her lessons were successful, although she had difficulty in remembering the time and place for tnem.

At this time, the other children in the group were rehearsing for an operetta. Upon the suggestion that she come to rehearsal, she became upset and declared in anger that she wanted nothing to do with any kind of a stage presentation where she would have to go in front of people. It was pointed out to her that she already knew the chorus numbers because of listening to the group rehearsals. However, her problem seemed to be centered in the fact that she would be identified with a group of handicapped children. The suggestion was given that she could help usher, an activity involving mainly herself. She readily consented to do this and began to attend the rehearsals, but confined her activity to sitting in the back row and criticizing the performance of her classmates.

When another girl her age had to drop out of the cast the day before the first performance, P was asked if she would help out on stage. Her role was that of a court maiden, one of five girls her age who had unison lines to speak and several songs to sing. With some hesitation, she consented to "help a little," but only if she also could be an usher before the performance.

During the operetta, she showed some confusion and needed to be helped with stage directions, but otherwise sang and acted with freedom and imagination. For the first time, she seemed to identify well with the group, as evidenced by a helpful attitude towards others, her use of the word "we" instead of "I," and by bringing her mother to hear "our" performance.

It was the belief of the staff and her parents that her participation in the operetta was a significant point in her increased awareness of her handicapped condition and need for help. P is presently starting her second year in the school and is most cooperative. Her tremor has lessened enough that now she is able to play the autoharp in class band.

Many children with cerebral palsy are unable to enjoy significant group relationships because of their inability to hear sound. This inability frequently results in poor speech communication.[101] Difficulty in hearing is found in varying degrees among children with cerebral palsy. Singing and playing groups are somewhat meaningless, and rhythm problems are difficult to overcome when the hearing loss is profound. Listening to records for music appreciation often proves boring unless the therapist can find means of increasing the child's awareness of the elements of music through nonauditory means. With increased awareness of sound, the child can be taught to identify sounds of different instruments, to identify songs, and to develop musical skills that will allow him to be a contributing member of a group, psychologically as well as musically. There are mechanical devices that can be used to bring about an awareness of sound and rhythm. Among these are the oscilloscope (to show an image of sound on a picture tube) and the kymograph tracing (to show rhythm and rhythmic response). Another device that has proved successful works through tactile sensations and is described in the following case history.

Case 2. C was a nine-year-old boy who had athetoid type cerebral palsy but could ambulate independently. His gait was poor and was accompanied by considerable falling. He had much involuntary movement of the upper limbs and was quite hyperactive. He was moderately retarded in language development and had a severe bilateral hearing loss. His hearing loss was partially overcome by a hearing aid, but he continued to have much distortion of high frequencies. As a consequence of his conditions, C tended to withdraw from his classmates and did not mingle readily during playtime. In the classroom, he had a short attention span and did not participate in class discussions. He had to have directions repeated; he seemed to hear, but did not respond appropriately.

C was referred to the music program as a kindergarten pupil. One of the primary goals was to provide a group activity in which he could learn acceptable group behavior and where he could develop his attention span while gaining a musical skill which would give him group status. It was decided to capitalize on his fondness for exploring and his mechanical interest, which found expression in handling instruments and attempting to take them apart. However, it was found that group instrumental music was highly stimulating to him, and the total environment of the music area was too distracting. He played very loudly and with completely uncoordinated rhythm, to the annoyance of the others in the class. He did not participate in class singing and ignored records. He did enjoy watching filmstrips and sound movies.

Because of his behavior problems, it was decided to drop him from group music and place him in a separate class with two other children having similar hearing problems. A vibration amplifying system was devised. It consisted of a 12-inch loudspeaker placed on a low stand over which a bass drum could be placed. The vibrations of the speaker were amplified by the bass drum. The children then placed their fingertips on the drumhead and were able to feel and hear the music. The vibrations were now strong enough to bounce a coin into the air and thus could be seen. Records with a very prominent beat were played; it also was possible to use a microphone hookup to amplify piano or vocal sounds. Emphasis was placed on gaining skill in matching rhythms until C was able to play on selected beats of a measure. Notated rhythms were placed on the board to help establish a visual-motor response. Gradually, he was led from the drum vibrations to feeling the vibrations of the piano, and finally to listening only. Within a year, he had mastered the playing of rhythms from a printed score. He no longer needed to see the source of sound and was able to depend on his hearing alone.

When C was again enrolled in his regular kindergarten music group, all reports were of satisfactory adjustment. His cooperation was excellent, and his attention span increased. Musically, he was at, or above, the level of his classmates and was able to read from his band book. He took a lively interest in the instruments in the room and learned to play the chord organ and autoharp. The bass drum continued to be his regular instrument. There had been some carry-over into singing, with increased vocalization and better pitch control. He is a member of a bell-ringing group and has taken part in several operettas.

In a setting such as the hospital school, where the child is exposed to many educational and therapeutic programs, it is difficult to pinpoint the exact extent to which the music therapy program helped this boy. It is believed that he reached most of the goals that were aimed for in musical and physical development. Basic to his progress was his realization that he had a hearing handicap, that he could utilize what residual hearing he had to be successful in group instrumental music, and that he was truly a contributing member of a group formed to produce pleasing sounds. He gained enough skill through his awareness of vibration, meter, and dynamics to make good progress in coordination.

Music can be a valuable means of providing acceptable creative outlets for the child with cerebral palsy even though he may be so handicapped that he is unable to take an active part in music making.[102] "Creative," in this usage, does not mean the original creation of new works, but includes re-creation of existing work through intelligent, applied thought, or development of deeper understanding of a work of art, music, literature, or other media. Intelligent listening to records can be a creative activity that has important implications for the future of the child in his home. It is important because it can be the means of something more than mere entertainment. It can be the pathway toward a broadening of horizons, an interest in history, and an interest in contemporary thought.

It is the severely handicapped child that most needs such interests, for it is often this child who is the most highly dependent on others and unwilling to move toward independence. Such children usually have not discovered that striving and achievement often are followed by admiration and affection and feel that only helplessness generates kindliness.[103] The following case study concerns a boy with such feelings and the effective way music listening helped his emotional adjustment.

Case 3. D first was seen at the hospital school as an inpatient at six years of age. His condition was diagnosed as cerebral palsy, moderately severe athetoid type, with average intelligence. He showed much purposeless motion in his arms and needed heavy weights on both arms and legs for stability. Oral communication was poor because of lack of breath control and involvement of the speech musculature.

D was highly frustrated in his early music experiences by his inability to participate actively in group music and to recreate music as a result of his physical involvement. He seemed to be extremely sensitive to music and to moods created by certain types of music, and to understand many concepts of theoretical music. But he was unable to express himself in the active way he desired. He would push himself out of the circle or break into tears at not being able to grasp a rhythm instrument. He was very demanding in his relationship with adults.

The approach with D was to concentrate on the area of his highest interest: intelligent listening to good music reinforced with as much active participation as possible. The active participation was through playing the bass drum with a drum pedal. The intelligent listening was through individual work with good records, books, filmstrips, movies, and field trips. In addition, effort was made to give him a speaking part, even if only a line or two, in every school operetta. This was done for speech therapy goals as well as a means of encouraging walking. He had many original ideas in staging, costuming, and in planning the scenery and props.

As D continued to develop his new interests, his adjustment to those around him improved. He created genuine affection with volunteer students and with the staff. He gained a love for opera and through it a desire to read. He made several attempts to write librettos for operettas. D considered using music as a means of earning a living, either as a music critic or operating a record shop with his father. There was a lack of realism in the first goal, but the latter, although dependent on the father's role, was a possibility.

Dramatics can be a useful tool in the hands of the music therapist in helping the child with cerebral palsy change unsatisfactory behavior into satisfactory behavior. By combining dramatics with music in operetta form, the music therapist can sometimes help the child to initiate personality changes that can be reinforced by musical successes. Davis[104] discusses the value of dramatics as an aspect of play therapy technique and of the wider area of recreational therapy. He points out that such activity may be redirective, pointing the patient's interest toward more social behavior; that it may help the patient to see his attitude toward himself and his environment; and that it may be integrative, enabling the patient to focus his attention and to organize his motor and mental field into a constructive pattern.

Case 4. A was ten years old when first admitted to the hospital school. He was diagnosed as having spastic cerebral palsy with involvement in his lower limbs. He was tested and found to have "bright-normal" intelligence. His singing voice was clear and accurate, but he refused to sing in group situations. He gave glowing accounts of his instrumental music accomplishments, but could not produce results that confirmed his claims.

Little had been expected of him at home. He came from a fairly well-to-do family where he seemed to be able to do as he pleased. Some descriptions of this boy were "careless," "lazy," "lethargic," "immature," "needs prodding," "rude," and "lacks incentive." His behavior in the music class and in private instrumental lessons verified most of these descriptions. He loved the status a trombone gave and could manage it quite easily, but seemed unable to discipline himself into good practice habits.

One goal for A was to capitalize on his singing ability to establish immediate success. He was given the chance to sing a short solo in a Christmas operetta. The chance to sing for his parents spurred him to practice and to an excellent performance.

When rehearsals were begun for the operetta, "The Sorcerer's Apprentice," A was encouraged to take the title role, that of a very ambitious, outgoing, dynamic boy. It was hoped that in this way he could identify himself with another personality with more desirable characteristics. Even though he had enjoyed the success and acclaim of his previous operetta, A was reluctant to put forth the effort to learn the lines required. His performance at rehearsals was in his typical slow, lackluster way, with no sense of the part he was to play. Only a few days before the first performance, while he was helping with scenery and costumes, did he suddenly seem to become aware of his role and begin to feel the part. His singing, walking, talking, and gestures became real and believable. As a result, the morale of the entire group improved.

The most important result was the change in A's attitudes and behavior in the weeks following the operetta. He continued to show a high degree of motivation and enthusiasm. Even his attitude toward music and practice was improved.

A basic technique in working with the child who has cerebral palsy is free use of visual cues to establish neuromotor patterns. This paper has already outlined the instrumental approach through rhythm-reading, i.e., playing by reading music symbols. Similar success has been achieved in vocal music. The basic technique is ear training through rote singing of scales and chord patterns, accompanied by the use of sight-singing materials and a cognitive approach through note and harmony study. All this is reinforced through constant repetition and reference to instrumental technique.

This paper has discussed and illustrated how some problems of the child who has cerebral palsy have been solved through participation in directed musical activity. The typical attitude of these children was one of over-dependence. This was changed through participation in creative musical activities that gradually led to the development of courage and initiative. The unsatisfactory behavior pattern, characterized by lack of incentive and personal discipline, was changed to that of high motivation and enthusiasm through participation in operettas. Finally, problems of articulation and breath control were partially solved through a reduction of tension by means of properly guided singing techniques and performance.

Music Therapy for the Auditorially Disabled

Sister M. Josepha, O.S.F.

Introduction

Literature concerning music therapy for the deaf and the hard-of-hearing consists mainly of articles and clinical reports on the use of music at institutions for the deaf. These accounts indicate that some therapists and teachers have found music to be of value for the auditorially disabled, primarily as a positive influence on their development of a rhythmic sense and pitch discrimination. The few correlation studies and experiments that have been done also are concerned with rhythm and pitch discrimination, although the amount of published research in this area is minimal.

There seems to be general agreement among therapists and teachers about the particular values that rhythm has for the auditorially disabled, but the reports vary slightly with respect to approach and emphasis. Lane[105] cites the use of rhythm as an underlying factor in attaining the following objectives for the deaf child: (1) improved bodily coordination; (2) improved speech through better speech rhythms and correct accent; and (3) social habilitation through the acquisition of skill and grace in social dancing. Dattilo[106] stresses the use of music for the development of rhythmic sense, both as a preliminary step towards the development of poise, grace, and balance, and as a foundation for speech through accent and phrasing. Harbert[107] reports the use of specific music activities for the development of a sense of rhythm as an aid in treating certain speech problems associated with auditory deficiency. She believes that rhythmic experience can be used to reduce tension created by constant work with speech and language. In another report, Harbert[108] presents a case study wherein a deaf child's enjoyment of rhythmic response led to a more positive attitude toward treatment.

The deaf child's perception of music is based almost exclusively on his tactile sense. Given sufficient opportunity and guidance in this respect, he can learn to distinguish musical vibrations not only in terms of rhythm and accent, but with regard to pitch difference as well. Lane[109] describes a program in which deaf children learned to discriminate gross pitch differences through the sense of touch. With finger tips on the sounding board of the piano and with eyes closed, these children replied "high" or "low" as the teacher played chords in extreme registers on the piano. This approach is mentioned by Gilliland[110] as being in common use. Sister Giovanni[111] believes that a deaf child can become acquainted with the concepts of high and low sounds more effectively by playing the piano himself. She holds that the vibrations he produces on the piano can help him to gain a better concept of "high" and "low" as they are related to his own voice production.

Current music programs for the auditorially disabled tend to emphasize the same two facets of musical experience--rhythmic response and pitch discrimination. In some instances, music is used also to improve self-image and as a diagnostic tool. These uses are described in the paper beginning on page 234.

Research Literature

Available research literature on the use of music for auditory deficiencies is very limited. It comprises two correlation studies, two experiments, and a master's thesis. Simmons[112] tested the correlation of rhythm with lipreading on the assumption that rhythmic perception of auditory stimuli may be related to rhythmic perception of visual stimuli. This relationship might be of value in capturing the rhythmic aspects of speech. The test revealed a significant correlation of performance on the easier part of the Seashore Rhythm Test (Part A) with the lipreading ability that was measured by a filmed test, but not with lipreading ability that was measured in an interview. In her report of this study, Simmons refers to an experimental study of Heider and Heider in which the rhythm demonstrated in gymnastic tasks (dancing) yielded a correlation coefficient of .54 with lipreading ability. The results of both of these studies seem to indicate the existence of a positive relationship between motor organization and the ability to read lips.

Houchins[113] calculated a series of correlations between the ability to discriminate frequency (pure tone) and the ability to discriminate speech. Relationships were evident on a group basis, but when they were examined on an individual basis within the groups, there appeared to be little relationship between discrimination of frequency and discrimination of speech. The frequency discrimination that was measured in the study was limited to a rather narrow band on the frequency continuum. Inasmuch as the perception and discrimination of speech encompasses a much wider band of frequencies, Houchins concludes that the narrow-band discrimination may not have been the ideal manner in which to examine the relationship of pitch discrimination to speech discrimination.

Wecker[114] reports an experiment conducted in public schools to ". . . determine whether the completely deaf child could be brought to an appreciation of music, and through appreciation, to a self-expression in music somewhat approximating that of the normal child." Twelve children, classified as totally deaf, were given music through headphones with individual volume controls. After a period of exposure, they were asked to beat responses to the vibratory stimuli. They were able to respond, progressing from simple to double and triple rhythm. Finally, a selected group of four children beat a correct rhythmic pattern with a drum and tympani sticks to the music of an orchestra, giving evidence of individual response and expression to rhythmic stimuli.

Because the only pitch experience of the deaf child is on his own monotone level (usually "middle C"), the experiment included attempts to teach the children pitch discrimination with "middle C" as the starting point. The oboe was selected for this study because of its intensity. At first, the children were given ample opportunity to relate their monotone pitch to the same pitch on the oboe. Later, they learned to identify pitches five tones above and below as being "higher" and "lower." (An English horn was used for the lower pitch.) Identification was possible even when the size of the interval was decreased. Finally, the children were asked to reproduce in pitch the vibratory stimuli coming through the earphones. All were able to sing "middle C." One child was immediately able to match vibrations a major third higher in pitch, and others succeeded in doing this after three or four attempts. Wecker concluded, "if a deaf child can but react to a very narrow range of pitch differences, he can be taught to speak with the same natural voice inflections used by a person with normal hearing." The strength of this conclusion does not seem warranted.

The experiment cited by Meyerson[115] was performed by Griffiths to discover whether continuous exposure to amplified sound might have a positive influence on the hearing thresholds of infants diagnosed as deaf. Griffiths placed wearable hearing aids on more than 30 of these infants, all of whom were under eight months of age. After several months of experience with amplification, almost all of the infants showed normal responsiveness to sound without aid. In the opinion of Meyerson, this is one of the most exciting developments in the improvement of hearing.

Traughber[116] tested the ability of deaf children to discriminate musical stimuli such as music and noise, different rhythms, high and low tones, qualities of chords, intervals, musical instruments, and degrees of intensity. The 37 subjects, congenitally deaf adolescents institutionalized at a school for the deaf, were classified as aphasic, nonaphasic, with recruitment, without recruitment, and aphasic with recruitment. The tests consisted of randomized paired items played from a tape, both in a free field and through earphones.

Some subjects were able to discriminate between noise and music, but only one subject could discriminate significantly between high and low tones. The group as a whole responded significantly to the discrimination tests of rhythm, and to both chordal and intervallic qualities. The group did not respond significantly to different levels of intensity. Discriminations in general seemed to be better when the sounds were played in a free field. The subjects' ability to discriminate appeared to have no relationship to either the phenomenon of recruitment or the degree of hearing loss.

Traughber concluded that the deaf child can perceive some of the various components of music and, consequently, that music should be used to help him form rudimentary concepts of sound and to provide an environment that he can experience in common with the normal child. He also recommended that music for the deaf child be played in a free field, for this seemed to afford greater opportunity for tactual discriminations than did the use of earphones.

The amount of research literature concerning the use of music with the auditorially disabled is meager, but there is a book that may be particularly useful to the music therapist.[117] The few studies that have been done lend support to most of the clinical practices described. The following summarizes these results.

1. There is a positive relationship between motor organization and the ability to read lips.
2. There is little correlation between the ability to discriminate pure-tone frequency and the ability to discriminate speech.
3. Deaf children are able to respond to rhythm.
4. Deaf children are able to discriminate and match pitch.
5. Exposure to amplified sound appears to influence the development of normal responsiveness to sound in infants originally diagnosed as deaf.
6. Deaf children can be brought to some appreciation of music and, through this appreciation, a self-expression somewhat approximating that of normal children.
7. Participation in music therapy can help deaf children develop increased self-esteem, better interpersonal relationships, and a more profound awareness of the world around them.

Perhaps the general implication of these findings is that therapists should give attention to the psychological benefits that deaf children can derive from musical experience as well as to the benefits related to the development of spoken language.

Music for Deaf and Hard-of-Hearing Children in Public Schools

Harrold W. Spicknall

A music program for deaf and hard-of-hearing children in a public school system has been functioning on an experimental basis for the past three years. The children included in this program are enrolled in special education classes with trained teachers. A music therapist directly supervises the music activities for the children who range in age from four to 13 years. A music therapist is available also for consultation concerning students at the junior and senior high school levels.

The program has been directed toward the following goals: (1) to help improve self-image; (2) to increase oral vocabulary; (3) to stimulate lip reading; (4) to promote more rhythmic speech; (5) to supplement the teacher's knowledge of the nature of the individual's hearing loss; and (6) to help the children become aware of the variety of sounds and vibrations in their environment.

Goals 1 through 4 are served by similar activities, based mainly on song material but having variations of emphasis. Songs involving actions are used to promote self-concept of specific body parts and their bilateral, unilateral, and cross-lateral movements. Songs relating to posture, locomotion, and direction are used to teach concepts such as "up and down," "right and left," "stand and sit," "walk and run," and "slow and fast." Songs having new ideas and new words that supplement the standard reading fare are used to increase oral vocabulary. The meanings of new words are illustrated both with pictures and actions. After a song sequence has been learned, the children perform the actions while watching the teacher sing the song. This serves as a motivating factor in lipreading. As the children progress in their responses, they are encouraged to use the words that they can speak along with the teacher or therapist. Most of the children are able to "sing" the words by the time they are admitted to the fifth or sixth grade.

Whenever speech is added to the actions, attention is given to the rhythmic impulse in each word or phrase. Preschool and kindergarten children gather around a large bass drum laid on its side. Each child places his fingers on the head of the drum and watches the teacher's face as she speaks the word or phrase while simultaneously tapping the rhythm on the drum head. Older children may receive the vibrations of the rhythm through the floor or air, or may tap or clap it themselves.

Goals 5 and 6 are achieved through participation in activities that involve the use of musical instruments such as drums, bells, wood blocks, and wind and string instruments. Often a child's response to these sounds indicates the extent and nature of his hearing loss more clearly than does the audiogram. In game fashion, he is asked to respond to auditory stimuli, first by counting the tones, and later by making discriminations between sounds. Because visual clues are eliminated, the child is given opportunity to perceive the tones by three different means of vibrational transmission: direct; semi-direct; and air.

For direct transmission, the child holds or touches the instrument while it is being played. Semi-direct transmission occurs when the instrument is placed against a table or on a wooden floor which the child touches. Reception solely on the basis of air transmission is effected by elimination of direct and semi-direct transmission. Semi-direct transmission is eliminated to some degree by having both the child and the instrument on a carpeted area. Where this is not possible, the instrument is cushioned well to prevent continuing vibration through solid resonant material.

Application of the above procedure to many different sounds enables the teachers to gain insight into the functional hearing losses of their students. At the same time, the children gain experience with a wide variety of environmental sound stimuli which, in turn, serves to increase their awareness of the world about them. The counting of tones also promotes the development of number concepts. Whether this should be listed as a goal or a by-product is a matter of emphasis.

Recent investigation has been directed towards the use of frequency discrimination to help some deaf and hard-of-hearing children bring their voices into normal pitch range. The objective is to determine whether the child who has learned to discriminate between high and low frequency vibrations can learn to perceive the relationship of these vibrations to his own voice production.

The music program for the deaf and the hard-of-hearing in the public schools has contributed toward the improvement of self-image and the development of language in these children. In addition, some music activities have proved to be of diagnostic and stimulative value. Finally, the positive results of the program have "sparked" interest in further investigation, e.g., the possible values which pitch discrimination in music might have for the control of voice inflection in speech.

The therapist or "Music Consultant for Special Education" functions as a resource person for the special teachers and for the speech therapist. He visits the classrooms on a regularly scheduled basis and is available at other times when a special need arises. The philosophy underlying the overall program of the school is to help each child to become a citizen, self-sufficient and independent. Music in the special education curriculum functions as one means in a complete program directed toward appropriate life adjustment.

The above report brings to light an approach that is seldom mentioned in the literature concerning music therapy for auditory disabilities--the use of music as a diagnostic tool. The purpose of this approach was to supplement the knowledge obtained from the audiogram. This approach has particular significance for work with deaf children who are too young to respond to ordinary testing procedures. The following two cases describe the procedure used to determine the hearing condition of two young children who appeared to have hearing losses.

Case Reports

Cases Reported by Carol G. Crigler and Mickie Snively

Case 1. Since a very young child with an unknown degree of hearing loss is unable to follow directions for hearing tests, it is virtually impossible to judge the degree of his deafness. For this reason, two-year-old J was referred to music therapy. The speech therapists hoped that some idea of the degree of J's deafness could be gained by his response to musical instruments and noisemakers. Since a child normally learns to talk between the ages of three and five, it was further hoped that he could become familiar with the concept of sound and would desire to communicate with others, so that he could work with a speech therapist to develop spoken language and lipreading.

J's parents thought him deaf since birth. His records showed him to have a bilateral hearing loss, probably of the inner ear, and a history of ear infections since the age of three months. Speech therapists adjudged him to have a "severe hearing loss for social purposes." J appeared to be alert, cheerful, and eager to participate in most activities.

Sessions with the two music therapists were held twice weekly for half-hour periods. In addition to becoming acquainted with J in initial sessions, the therapists made sounds with the instruments behind J's back. If he turned to see what was there, the instrument was demonstrated, and he and the therapist would play with it. A variety of instruments and noisemakers were used, including the piano, the clarinet, the tambourine, rattles, whistles, drums, cymbals, ratchets, "Melody Bells," and similar instruments. Note was made of those instruments to which J responded and of the fact that he turned with his left ear to identify the instrument or noisemaker.

Many games were played after the several weeks of testing. J enjoyed strumming an autoharp placed on a wooden floor, especially when his ear was in contact with the instrument. He liked to place his hand on the piano while the therapist "pounded" chords. He wrapped his legs around a large bongo drum while he pounded it with a drumstick. He also reacted with glee to the experience of crashing a pair of cymbals together and then immediately placing one on each ear. It appeared that J was responding with enthusiasm to some aspects of sound. His ability to take directions and ideas from the therapists steadily increased, as did his ability to relay messages of his own.

Case 2. After four months, J was joined by C, another two-year-old boy, who had been referred by the speech therapy department for reasons similar to J's. C, although curious about his surroundings, cried and ranted when separated from his mother. He was destructive with the instruments and toys presented to him and did not respond to nonverbal directions from the therapists. He reacted to J either in a hostile manner, or not at all.

In testing C with instruments and noisemakers, it was immediately apparent that he reacted to many more than J had. However, his attention span was so short and his hostility so apparent that, when given an instrument to explore, he would usually toss it across the room.

With constant encouragement, C gradually lessened his destructive behavior and demonstrated an interest in the bongo drums, the piano, many rhythm instruments, and even "Melody Bells." Both boys learned to blow toy horns in an effort to develop breath control as a preparation for spoken language. "Follow the leader" became a favorite game for learning to follow the person "in charge."

Two months later, both boys were fitted with earphones to make use of the residual hearing which their responses to music indicated they had. With a hearing aid fitted to his left ear, J was found to have a pure-tone loss of approximately 100 decibels in the right ear and 80-85 decibels in the left. It was felt at this time that he was ready for speech training and lipreading. C was fitted with a hearing aid to his right ear and was found to have a pure-tone loss of approximately 85 decibels in the right ear and 90-100 decibels in the left. The response of these two children shows that music therapy has possibilities for testing very young children with severe hearing loss, for helping them to develop familiarity with sound, and for encouraging a desire to communicate with others.

The two case histories cited illustrate the value of music as a means of testing the very young deaf child. In both cases, the music activities seemed to facilitate subsequent use of earphones and audiometric testing as well. Sister Giovanni[118] also recognizes this last-mentioned value of music for the deaf when she refers to the use of recorded music to build up tolerance for sound as a preliminary for the fitting of hearing aids and eventual audiometric testing. In addition, she stresses the importance of having deaf children play simple wind instruments for the development of a breath control that will be adequate for later speech production.

Music Therapy for the Visually Disabled

Sister M. Josepha, O.S.F.

Conditions of blindness can range from complete to slight loss of sight. For practical purposes, however, a definite line of demarcation has been drawn between partially-sighted persons and those who are not able to function with the aid of a correction and/or the use of sight-saving devices. Legally, a person is defined as being blind when he has a "visual acuity of 20/200 or less in the better eye after correction, or a visual field restricted to less than 20 degrees in the widest diameter."[119]

Distinction also is made between the blind and the blinded through the use of terms such as "congenitally blind" and "adventitiously blind." According to Carroll,[120] these distinctions do not clearly define the essential difference between the person who has never seen and the person who has seen, but has lost his sight. Carroll holds that intelligent efforts toward rehabilitation of the blind are not possible unless there is a realization of a qualitative difference between congenital and adventitious blindness. Yet, he feels that it is only by gaining greater insight into the problems of the adventitiously blind that one can come closer to recognizing the problems of the congenitally blind.

In his book on blindness, Carroll deals mainly with problems involved in the rehabilitation of the adventitiously blind. For Carroll, rehabilitation of the blinded person implies restoration of losses in psychological security, basic skills, communication, appreciation, occupation and financial status, and personality. In their subdivisions, these areas embrace a total of 20 specific losses. Carroll describes rehabilitation as having four main phases that are involved in varying proportions in each of the 20 restorations: "training the other senses to take over the role of sight; training in skills and the use of devices; restoring psychological security; and influencing the attitude of his society to him and assisting him to meet the prevailing attitude."[121]

Principles of rehabilitation for the adventitiously blind are mentioned in some of the music therapy literature. Dauterman[122] describes the rehabilitative process for the adventitiously blind as having three stages: (1) acceptance of blindness as an emotional reality; (2) depression; and (3) subsequent rebuilding of self-concept. He attributes the discovery of these basic concepts to Cholden who believed that certain definite reactions could be expected from a "normal" person upon his loss of sight and that it was possible to discover a certain sequence of events and treatment procedures for use in a planned rehabilitation program.

In a review of music therapy literature related to rehabilitation of the blind, Unkefer[123] recommends as appropriate to all rehabilitation work a short paper of Cholden in which rehabilitation efforts are divided into three classifications: (1) the physical restoration class; (2) the educative rehabilitation effort; and (3) the psychological rehabilitation effort.

Values of Music and Music Activities

Literature concerning the use of music with the blind consists of articles describing music practices and of studies and investigations in the form of master's and doctoral theses. Although some works relate to a functional use of music in the rehabilitation of the blind, a greater part of the literature reviews the subject from the standpoint of music education. Even in these works, occasional references are made to particular therapeutic values which music appears to have had for the blind.

The music practices described seem to parallel those followed in the music curricula of most elementary and secondary schools. Gilliland[124] summarizes the activities by classifying them into the four categories of singing, listening, playing, and dancing. Beetz[125] tells of a program that includes courses in music theory and class and private instruction on musical instruments. Grupp[126] calls attention to the fact that some present-day bands are made up of both blind and sighted students because of the increasing number of blind students attending public schools. He shows how this program can be handled successfully--even including a marching band. Crocker[127] describes a creative, therapeutic approach in the teaching of piano to the blind child of preschool age. She claims that piano is not widely used in training programs for the very young child, although piano instruction is generally offered to students in schools for the blind. Baldwin[128] reports her observations of blind students participating in music activities such as rhythm band, pantomime, eurhythmics, the playing of piano and flutophone, and listening to "talking books" (phonograph records) for the purpose of music appreciation.

These same educators and music therapists believe that the blind can derive positive benefits, over and above those that they derive in common with the sighted, from participation in music. Crocker[129] stresses the importance of using music with the blind as a means of emotional expression that is socially acceptable and inwardly gratifying. Although this particular value of music also is available to the sighted, it takes on a therapeutic significance for the blind because they are constantly exposed to frustrations that demand emotional release. Crocker also maintains that piano playing can have specific values for blind children as a means of integrating the aural, kinesthetic, and tactile modalities of learning.

Both Gilliland[130] and Baldwin[131] have described the values that eurhythmics, or movement to rhythm, can have for blind children. Gilliland believed that this activity gave them physical security, and helped them develop grace of carriage and feelings of independence. Sighted children can derive similar values from participation in eurhythmics, but they also can attain them through the use of vision. According to Baldwin, free eurhythmics affords the blind a satisfying release that enables them to move about with the bodily freedom of "seeing" children.

Beetz[132] claims that not only blind people, but also many sighted people, feel that their life and education would be incomplete without music. Since music has many recreational aspects, and since many recreational activities are not available to the blind, he concludes that blind people are probably often attracted to the study of music because of its recreational values.

Research Literature

Research literature concerning the use of music with the blind includes investigations of the status of current practices, the development of adequate teaching procedures, the effectiveness of music in rehabilitation programs, and the comparison of the sighted and the blind in certain areas of musical performance.

Four studies describe current practices in music programs for the blind. Two of these investigate practices in the general music education curriculum, and two investigate practices in the instrumental program. All four studies survey objectives, practices, methods, and procedures, both for purposes of evaluation and for obtaining information that might contribute to further progress of those handicapped through loss of sight.

Haldiman[133] (1953) studied music programs in residential schools for the blind. She obtained her information primarily through a questionnaire sent to 75 schools in the United States, Canada, Hawaii, and Puerto Rico. Her other sources of information were readings, personal observations, research carried on at two schools, personal interviews, and materials for the blind. Her summary of the music curricula shows them to be similar to regular music education programs, but with three added points of emphasis: (1) the use of vocal music to relax muscles of the throat, chest, and diaphragm (this is considered significant because the blind are inclined to be tense and find physical repose and relaxation difficult to attain); (2) the learning of music history and appreciation as a substitute for attendance at concerts and operas; and (3) the study of harmony for an adequate understanding of braille music. Although piano tuning seems to head the list in vocational training, the lack of available music literature in braille and the blind person's inability to sight-read are considered handicaps to his pursuit of professional music. Haldiman concluded that music is given special emphasis in schools for the blind because of the intrinsic values it seems to have for those areas that are of principal interest in the education of the blind--areas of personal and social adjustment, psychological development, and economic independence.

The study by Elam[134] consists of an investigation of the methods and procedures employed in teaching music to the blind at a particular state school. Elam developed her study through a review of pertinent literature, observations, tape recordings, and an analysis and appraisal of the data. The music activities observed in this study were classified according to the three levels of primary, intermediate, and advanced music. The primary music program (grade 1) included singing, rhythms, listening, instrumental, and creative activities. Part-singing and eurhythmics were added at the intermediate level (grades 2-4). Braille music and music appreciation were stressed in the advanced program (grades 5-7). The methods and procedures followed were based mostly on five general principles of education of the blind: individualization; concreteness; unified instruction; added stimulation; and self-actualization. At the conclusion of her study, Elam confirms these three facts: (1) educational processes for the blind must be tangible and concrete; (2) creativity is necessary for easing rigidity as well as for developing spontaneity of thought and action; and (3) activities on lower grade levels should involve the whole child.

The first of the two studies that are concerned with instrumental music programs for the blind centers exclusively on use of the piano. McCuskey[135] surveyed seven schools having instrumental instruction for the blind. He investigated several aspects of piano instruction including pre-piano experiences with music, planning the lesson, introducing notation, ear training, and materials for beginning piano. The results of the survey showed that five out of seven schools stressed private piano instruction. There also was evidence that the performance of popular music has been the most common way for the blind to secure an income through music, probably because such music lends itself to an individualized approach, thus being less rigid in its demands and more adaptable to the handicap of blindness. McCuskey recommended that the class-piano approach be used more frequently in teaching the visually handicapped child, because the class approach can foster socialization and cooperative responsibility, consequently dissipating the aloneness of the child.

Cascio[136] investigated the status of general instrumental programs for the blind. The particular purpose of his study was to ascertain the status of the teaching personnel, the methods of teaching, and the importance of instrumental performance for the visually handicapped. Following the normative survey method, Cascio sent a check-list to all State Superintendents of Schools in the United States and a questionnaire to all the schools that he knew in which the visually handicapped were taught. Cascio discussed the curricula and techniques revealed in this study from a purely educational viewpoint. The values he attributed to music were mainly those that the blind person experiences in common with the sighted. However, one outcome of his study appears to be particularly significant--the indication that considerably more emphasis is being placed on music in schools for the blind than in other schools.

There are three studies that are related to the development of adequate teaching procedures in music programs for the blind. The first is a study of the reactions of elementary children to a modern music education program in a residential school for the blind. It was made by Stoltz[137] in an attempt to discover the materials and procedures which have proven practicable in teaching music to the visually handicapped. The curriculum that was compiled as a result of this study seems to parallel regular music education curricula, both in content and procedure. One exception was made for the blind. Models were used as an aid in forming concepts of certain material objects. The study seems to focus the need for consideration of two objectives when teaching the blind child: (1) to enable him to take an independent place in the world of the sighted through the development of initiative, self-confidence, and cooperation; and (2) to lead him to realize that he has many abilities and capacities which place him on an equal footing with the sighted.

The work of Hoy[138] is based on a questionnaire sent to piano teachers in schools for the blind in the United States and Canada. The work is of educational significance for the music therapist. In it, Hoy gives a clear explanation of the relation of braille music to the braille alphabet and indicates the exact point in the learning of braille that the child should be ready to begin his first piano book. He also explains the two general methods of "reading and playing" and "memorizing and playing" that are employed by the visually handicapped in learning to play particular selections on the piano. This knowledge, plus a list of method books and suggested procedures, might prove a valuable aid to the therapist who needs guidance in teaching aspects of this activity.

DiPasquale's[139] thesis was intended as a beginning instrumental program for use in institutions for blind children. It includes a long list of substitute devices to be used in explaining problems to the students. These problems relate mainly to descriptions of instruments, manners of holding them, and required embouchures. DiPasquale also suggests a modified technique for conducting an instrumental ensemble of blind performers. His work is of value as a system of adaptive techniques for the presentation of ideas that normally depend on sight for their proper understanding.

Research literature relating to the effectiveness of music in the rehabilitation of the blind consists of three studies. The bases of their findings are experimental, experiential, and exploratory. The experimental study of Hartley[140] deals with the effectiveness of music activities in aiding the blind child's individual growth and adjustment to his physical limitation. In this work, Hartley presents several considerations of childhood blindness and their indications for musical experiences which he derived from clinical experimentation. Because of the absence of visual stimulus, the blind child is characterized by bodily inaction and a retarded organization of physical faculties. Perception of auditory and tactual stimuli is basic to his independent movement. Music has several important applications: it can be used to provide the necessary stimulus for movement; it can facilitate action without emphasizing an isolated physical act; and its demand for various levels of physical skill and bodily coordination leads to expansion of the blind child's physical capability. Music can help to develop social awareness in the blind person because it is social by nature and because it demands a great deal of group participation. At the end of his study, Hartley cites several areas of improvement that he observed to be the result of the musical activities. He claims they prove that "functional music" can have many beneficial effects on the life of a blind child when it is applied scientifically.

Schapiro's[141] work utilizes piano experiences in the rehabilitation of the blind adult. Her findings and recommendations are based mainly on her direct experiences in this area. She has organized them according to problems, basic aims, and precautions, follows this with a detailed description of the first ten lessons to be given at the piano. Schapiro believes that the therapeutic possibilities of piano playing lie in two main areas: the constructive interaction resulting from the therapist-client relationship; and the cycle of personal gratification → sense of accomplishment → self-confidence → motivation → real learning. She also believes that the development of a musical skill gives the blind person the power to reproduce music and experience it at will--a power not possible in many other skill areas. She lists the values she has observed music to have had for the blind person as a positive influence on his acceptance of his physical condition, as a means of helping him to construct or reconstruct his self-confidence, and as a means of stimulating his interests.

Unkefer[142] reports a research project in which a tentative, two-year music therapy program was developed for use in a rehabilitation program for the adult blind. The first part of the project was necessarily exploratory. In the ensuing study, uses of music that tended toward goals of hobby formation or the development of leisure-time activities were recognized as being valuable, but were excluded from the discussion. Unkefer classified the music activities that were carried out in the project as being creative, educational, recreational, and as promoting the development of manual skill. He called attention to those music activities that appeared to have had significance in the adjustment phase of the rehabilitation process and to those that yielded early and important diagnostic materials. He also pointed out the therapeutic value of relationship guided by the music therapist. These several considerations formed the basis of his selection and use of six case studies for descriptive purposes. In Cases 1 and 2, successful music experience was substituted for earlier unsuccessful experience. Cases 3 and 4 illustrated the use of music as an aid to diagnostic appraisal. Cases 5 and 6 gave examples of supportive relationships that can be attained through musical experiences. In his conclusions, Unkefer stated that, besides serving as a means of identifying particular values of music in the rehabilitation of the blind, the project had implications for continued effort in certain areas such as the use of music in travel-training and the use of rhythmic music to facilitate smooth walking movements in the congenitally blind.

Research literature on the use of music with the blind also includes three comparative studies of the blind and the sighted. In the first of these studies, Grissom[143] compared problems of teaching voice to sighted and sightless students in order to determine whether or not the teaching requirements for each group were different. Although her findings revealed that frequent, special attention had to be given to the blind students' problems of breathing and muscular tension, Grissom concluded that the teaching approach for both groups of students was essentially the same.

The second comparative study is not specifically concerned with music, but its results may have implications for the use of music with the blind. In this study, Schwartz and Steer[144] compared the reactions of congenitally blind and sighted subjects to delayed auditory feedback. The subjects of this study were 17 young adult males. Seven of them were congenitally blind, ten had normal vision, and all had normal speech and hearing. They were presented with two stories, one through listening and one through silent reading. Recordings were made of their impromptu retellings of the stories under synchronous feedback and under three different conditions of delay. The amplification levels for these feedback conditions were based on each subject's determination of his own tolerable loudness level. The blind subjects showed a reduced phonation/time ratio under all conditions of feedback. They also tended to have lower indices of major sound pressure level than the sighted for synchronous feedback. Both groups showed a reduction in the index of sound pressure level under conditions of delay. Schwartz and Steer concluded that the gross difference between the phonation/time ratios of the blind and the sighted seemed to confirm the supposition that blind persons are more susceptible to side-tone alterations than the sighted because they depend to a greater degree on auditory cues in the environment.

The third comparative study is that of Heim,[145] who compared the scores made by students on the secondary level in residential schools for the blind with norms established for sighted students on the Wing Standardized Tests of Musical Intelligence. One hundred and twenty-five students from seven schools were selected as subjects for the test. The series of seven tests, included in the test as a whole, covered various areas of music ability and appreciation. None of the tests required the students to read a musical score.

Although the results of the tests showed fewer scores in the mid-range of ability than would have been expected, the median scores for both the boys and girls were in keeping with the expectancies for sighted subjects of the same age. The standard deviation indicated no great difference in the distribution of scores between the sexes. On the basis of the data gathered in this study, it would seem that the blind are not superior to the sighted in music ability.

Implications and Conclusions

Articles and clinical reports about the use of music with the blind were observed to be mainly descriptions of music practices and techniques in this area. The reports were generally of educational significance, although they had occasional references to particular therapeutic values that music appeared to have for the blind. Few works directly concerned functional use of music with the blind.

In an earlier discussion of rehabilitation of the blinded person, reference was made to four main phases of rehabilitation: (1) training the other senses to take over the role of sight; (2) training in skills and the use of devices; (3) restoring psychological security; and (4) influencing the attitude of his society to him and assisting him to meet the prevailing attitude. Examination of the various approaches presented in the research literature shows that to some extent at least the first three phases of rehabilitation of the blind are being accomplished. There seem to be no music activities directed specifically to the realization of the fourth phase of rehabilitation, unless it could be inferred that the attitude of society toward the blind is influenced indirectly by the promotion and accomplishment of the first three phases.

It is the opinion of the writer that the difficulty experienced in organizing and evaluating the data obtained on the use of music with the blind might be considered an indictment of the type of literature that is available. Although surveys and observations are valuable as indicators of directions and tendencies, it would seem that the area of music therapy for the blind needs more goal-directed activities and experimental research on which to base them.

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PART VIII

THE DEVELOPMENT OF MUSIC THERAPY IN COMMUNITY HEALTH CENTERS

CHARLES BRASWELL

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THE DEVELOPMENT OF MUSIC THERAPY IN COMMUNITY HEALTH CENTERS

Introduction

Charles Braswell

The music therapist is a competent musician who has received training in biological and behavioral sciences. The concluding phase of his undergraduate education involves a period of supervised clinical experience in a psychiatric hospital. This broad training allows him to assume increasingly varied roles within the psychiatric institution, and in other areas as well. The need for versatility among music therapists is demonstrated in the writings that follow, and each writer describes activities which may be important in the future of music therapy. The clinical settings are different in each section, but there is a common pattern: the programs described represent a movement toward the community and away from institutional isolation.

The community mental health movement is not a new phenomenon. In 1946, Congress passed the National Mental Health Act which recognized the inadequate conditions of the state hospital system. The Federal government offered help in research, manpower training, and the development of community facilities for psychiatric treatment. Official recognition of the mental health problem stimulated criticism of the state hospital system.[1] In 1955, Congress, realising the limitations of the National Mental Health Act, called for a comprehensive evaluation of mental health problems in the United States. An official organization, the Joint Commission on Mental Illness and Health, was formed to undertake an extensive five-year study. Thirty-six professional organizations engaged in caring for the mentally ill were invited to participate.[2] The results of this study were published in a report entitled Action for Mental Health.

After receiving the Joint Commission's report, President Kennedy made the following statement in his health message to Congress in 1962:

> I want to take this opportunity to express my approval, and offer Federal cooperation, for the action of the Governors of the 50 states at a special National Governors' Conference called last November. In accepting the challenge of the report of the Joint Commission on Mental Illness and Health, they pledged a greater state effort--both to transfer treatment of the majority of mental patients from isolated institutions to

> modern psychiatric facilities in the heart of the community, and to provide more intensive treatment for hospitalized patients in state institutions.[3]

Congress appropriated $4,200,000 to be given to the states to initiate plans for the construction of comprehensive mental health centers. In 1963, Public Law 88164 provided funds for the construction of many of these centers.[4] This sequence of events is unparalleled in the history of American psychiatry. Never before has such broad legislation been enacted on behalf of the mentally ill. Congressional involvement has supplied the goal, the means for its implementation, and a tentative timetable for completion. The community movement, in effect, is social progress decreed by legislation.[5]

Although each community mental health center will reflect the needs of the community in which it exists, there will be some common patterns of services. Each treatment complex will offer evaluation and diagnosis, therapy, rehabilitation, and aftercare.[6] It is likely that both inpatient and outpatient facilities will be provided. These community centers probably will be called mental health centers rather than psychiatric centers, and the treatment offered, in a majority of cases, will be described as counseling rather than psychotherapy. This change of names might help to remove some of the stigma attached to treatment. The convenience of community centers and the reduction of stigma may motivate patients to seek treatment. Barton suggests that individual psychotherapy is not practicable.

> "There are many indications that most of the centers consider individual psychotherapy as the treatment of choice, or, as one director put it, 'the backbone of our therapeutic program.'" This may be interpreted to mean that individual psychotherapy is the ideal toward which the psychiatrist wishes to move. This idea, if it is one, should be recognized as a fantasy, for the numbers of persons requiring help are such as to make prolonged psychotherapy (and even individual psychotherapy by the physicians as the principal form of therapy) impractical in the majority of cases.[7]

It is likely that group psychotherapy and an extensive activity program will be adopted.

The following section by Folsom is a shortened version of an official report to the Clinical Practices Committee of the National Association for Music Therapy. This section documents many changes that are taking place in the organization and practice of therapy. Because these changes are likely to alter the practice of music therapy, they are of serious concern. Although some of the factors described in this section are not directly pertinent, they are included so that a more complete view may be obtained.

The Developing Situation

Geneva Scheihing Folsom

Barton has predicted some occurrences that will affect planning in mental hospitals.

1. First admissions will increase 17 percent in the next 10 years.
2. First admissions will increase 37 percent by 1980.
3. There will be little change in the number of children under six.
4. The number of children under 18 will increase 20 percent.
5. The number of admissions to mental hospitals will increase 40 percent for the age group 15 to 44, 40 percent for males over 65, and 60 percent for females over 65.[8]

The increase in first admissions may mean that work on admissions wards will be increased. Because of staff shortages, active treatment usually is concentrated in these wards. With the increase in the number of children between the ages of 6 and 18, there will be more emphasis on music therapy for children and adolescents. The music therapist must be able to provide music for these age groups. The increase in the number of admissions from ages 15 to 44 implies that many current practices will continue to be useful, because most practices have been geared to this age range. The increase in the number of hospitalized patients in the age group of 65 and over emphasizes the importance of techniques in music therapy for geriatric patients.

With the increase in hospital admissions, several important changes in the pattern of treatment of mental illness will occur. The duration of hospitalization for many patients will be reduced. Many persons will be treated in the community without any initial hospitalization. Three of every four persons newly admitted for inpatient treatment will be returned to the community in 30 days. Perhaps half of the cases admitted will be able to leave the hospital after 15 days, although they usually will continue therapy in the community setting.[9] Among the factors responsible for these shortened hospitalizations will be the following: (1) availability of acceptable services in the community; (2) knowledge of where to turn for help at any hour; (3) individualized therapy promptly applied; (4) early return home upon obtaining relief of symptoms; (5) more families participating in therapy; (6) preparation for return will begin at admission; and (7) availability of day hospital and aftercare treatment resources.

Perhaps the most important change for music therapists will be the short stay of many patients. If music therapists have only 15 to 30 days in which to work with a patient, some adjustments in present practices and short-term goals will be necessary. There will continue to be a need to treat some long-term patients, but it seems that much emphasis will be on short-term treatment programs. Many present techniques will be used, but new skills will have to be developed for giving more immediate, musically satisfying experiences. Patients will need to be taught skills in 30 days, which they can take home with them and which they will be able to continue. This means the placing of patients in the correct musical situations as soon as possible, because of the limited time to work with them in the hospital.

Students in training for music therapy probably will learn those instruments which provide immediate satisfaction, such as the guitar and ukelele. Patients will be taught to "play by ear" rather than by sight, because one month is a short time in which to develop an adequate sight-reading skill. Group work will have to be geared to a more adaptable repertoire because there will be a constant turnover in membership in the music groups. More families will be participating in therapy.

It appears that about half of the "hospital-destined" patients can be treated in the community without inpatient admission. Many patients with emotional and psychological illnesses will be admitted for initial care to general hospitals or to community mental health centers. Others will be served by home treatment, outpatient clinics, or other agencies.[10] Because numbers of patients will be released from hospitals for continued treatment in community settings, and others will be treated entirely in the community, the work of music therapists will not be confined exclusively to mental hospitals, but will be used in community treatment programs also.

The changes in treatment patterns for mental illnesses will help hospitals meet the predicted increase in admissions.

> Early recognition and treatment of mental illness through the use of home visiting, outpatient clinic, day hospital, and general hospital beds can greatly reduce admission pressure on the public mental hospital. If these trends are encouraged, and the evidence indicates they will be, no additional mental hospital beds will be required to meet population increases except for the age group over sixty-five.[11]

The shift to community treatment settings will cause the mental hospitals to concentrate their efforts upon two major aspects of psychiatric care. These are the rehabilitation of the chronically ill mental patient and the care of the aged. The state hospitals also may be used for the care and treatment of all chronic medical diseases.[12] The value and function of music therapy in the mental hospital will remain much the same.

Some problems in present hospital procedures may serve to indicate useful changes in music therapy practices.

1. The expansion of the patient's relationships with a few persons into the demand that he form relationships with many different people.

2. The use of most of the time of workers in staff conferences and meetings rather than in patient treatment.

3. The use of a costly escort system to bring patients to offices and off-the-ward activities instead of making the ward the central focus of therapy.

4. The limiting of medical services to the period of 9 a.m. to 5 p.m. Monday through Friday.[13]

Therapy on an individual basis to develop an extensive interpersonal relationship with a patient will become less practical, and music therapy will need to lean more toward group activities. Part of the therapeutic process will take place in the interrelationships of group members and will be much less limited to an individual relationship between the patient and therapist.

In summarizing trends, to quote from Action for Mental Health:

> A third, more recent trend combining sociology and psychology with psychiatry has been the systemization of "normal treatment" or social treatment, based on interactions of groups living, working, and playing in a "therapeutic milieu," or beneficial environment. . . . the third (social) trends have the advantage of better adaptation to mass application.[14]

It is in this third trend that music therapists will have their most useful function. There are many opportunities to promote interactions of groups playing and working together in a therapeutic milieu. What has been done with music in therapeutic situations will remain applicable. Probably the greatest change will be in the reduction of available time. Musical groups will have to be developed quickly while making sure that the group process is therapeutic and musically satisfying.

Recommendations for Better Use of Present Knowledge

In 1961, the Joint Commission on Mental Illness and Health made some recommendations for the better use of present knowledge and experience.

> In the absence of more specific and definitive scientific evidence of the causes of mental illness, psychiatry and the allied mental health professions should adopt and

practice a broad, liberal philosophy of what constitutes and who can do treatment within the framework of their hospitals and other professional service agencies, particularly in relation to persons with psychoses or severe personality or character disorders that incapacitate them for work, family life, and everyday activity. And, all mental health professions should recognize:

> A. That certain kinds of medical, psychiatric, and neurological examinations and treatments must be carried out by or under the immediate direction of psychiatrists, neurologists, or other physicians specially trained for these procedures.
>
> B. That psychoanalysis and allied forms of deeply searching and probing "depth psychotherapy" must be practiced only by those with special training, experience, and competence in handling these techniques without harm to the patient--namely, by physicians trained in psychoanalysis or intensive psychotherapy plus those psychologists or other professional persons who lack a medical education but have an aptitude for, training in, and demonstrable competence in such techniques of psychotherapy.
>
> C. That nonmedical mental health workers with aptitude, sound training, practical experience, and demonstrable competence should be permitted to do general, short-term psychotherapy--namely, treating persons by objective, permissive, nondirective techniques of listening to their troubles and helping them resolve these troubles in an individually insightful and socially useful way. Such therapy, combining some elements of psychiatric treatment, client counseling, "someone to tell one's troubles to," and love for one's fellow man obviously can be carried out in a variety of settings by institutions, groups, and individuals, but in all cases should be undertaken under the auspices of recognized mental health agencies.[15]

Obviously, music therapists are not qualified under A and B, but they fit the qualifications under C. It would seem a waste of training, however, to do general, short-term psychotherapy as described when much can be accomplished by using the knowledge and skills of music therapists. Perhaps this was what was implied under C when it said that this psychotherapy could "be carried out in a variety of settings." The setting for music therapy is the unique milieu provided by participation in musical activity.

In Action for Mental Health, it is recommended that:

> Persons who are emotionally disturbed--that is to say, under psychological stress that they cannot tolerate--should have skilled attention and helpful counseling available to them in their community if the development of more serious mental breakdowns is to be prevented. . . . In the absence of fully trained psychiatrists, clinical psychologists, psychiatric social workers, and psychiatric nurses, such counseling should be done by persons with some psychological orientation and mental health training and access to expert consultation as needed.[16]

Mental health consultants, such as psychologists, social workers, nurses, family physicians, pediatricians, and psychiatrists, should be available for systematic consultation with the mental health counselors. The consultants would render three basic services.

5

1. Provide counselors with mental health training at the helping professional level--briefly, on-the-job training.
2. Provide general professional supervision of subprofessional activities.
3. Provide the moral support and reassurance that has been found essential for most persons working with the emotionally disturbed or mentally ill, whether medically trained or not--a support most important for persons in training.[17]

Music therapists qualify for the classification of mental health counselor and could be members of the mental health professional team. Many music therapists have held such positions already in their clinical practice. Although not mentioned in the list of qualified mental health consultants, music therapists have had as much training as psychiatric nurses. Some have directed the clinical training of music therapy students, thereby gaining experience that could be of use in the training of mental health counselors. Trained music therapists are able to provide general professional supervision of subprofessional activities in music.

The report, Action for Mental Health, has several recommendations:

> We should recommend pilot studies in the development of centers for the re-education of emotionally disturbed children, using different types of personnel than are customary. . . . It is desirable to find alternative patterns of care for large groups of emotionally disturbed children both of normal and retarded intelligence. It is suggested that a system of schools and training programs for re-education of emotionally disturbed children be established on a research basis.
>
> The schools would be operated by carefully selected teachers working with consultants from the mental health disciplines. They would not take the place of facilities for seriously disturbed children, nor of special classes in the public schools, but would relieve pressure on hospitals, mental health centers, and public schools.[18]

Music therapists who have specialized in working with emotionally disturbed and/or mentally retarded children should be valuable in a program like this, not only in working specifically with music, but in being able to act as consultants for the teachers.

The recommendation from Action for Mental Health for the intensive treatment of acute mental illness is as follows:

> There is a need for expanding treatment of the acutely ill mental patient in all directions, via community mental health clinics, general hospitals, and mental hospitals, as rapidly as psychiatrists, clinical psychologists, psychiatric nurses, psychiatric social workers, and occupational, physical, and other nonmedical therapists become available in the community . . .
>
> . . . .
>
> Community mental health clinics serving both children and adults, operated as outpatient departments of general or mental hospitals, as part of state or regional systems for mental patient care, or as independent agencies, should be regarded as a main line of defense in reducing the need of many persons with major mental illnesses for prolonged or repeated hospitalization. Therefore, a national mental health program

> should set as an objective one fully staffed, full-time mental health clinic available to each 50,000 of population . . .[19]

Music therapists should be prepared and ready when these community health clinics are formed. They should be cognizant of their possible roles.

Intensive psychiatric treatment centers are also of concern.

> Smaller state hospitals, of 1000 beds or less and suitably located for regional service, should be converted as rapidly as possible into intensive treatment centers for those patients with major mental illness in the acute stages or, in the case of a more prolonged illness, those with a good prospect for improvement or recovery. All new state hospital construction should be devoted to these smaller intensive treatment centers.[20]

Because music therapists have worked with patients on active treatment wards, they will be able to serve in an intensive psychiatric treatment center.

Chronic Mental Patients. The recommendation for the care of chronic mental patients is as follows:

> No further state hospitals of more than 1000 beds should be built, and not one patient should be added to an existing mental hospital already housing 1000 or more patients. It is further recommended that all existing state hospitals of more than 1000 beds be gradually and progressively converted into centers for the long-term and confined care of chronic diseases, including mental illness. This conversion should be undertaken in the next ten years.
>
> Special techniques are available for the care of the chronically ill and these techniques of socialization, relearning, group living, and gradual rehabilitation or social improvement should be expanded and extended to more people, including the aged who are sick and in need of care, through conversion of state mental hospitals into combined chronic disease centers.[21]

It is suggested that these centers would have fewer psychiatrists and a larger number of nurses, occupational therapists, and, it is hoped, music therapists.

Geriatrics. Music therapy could serve well in the clubs and community programs of old people. Many of these persons have used music as a hobby at one time or another in their lives. A number have sung in church choirs and some may have been involved in community bands or orchestras. If these interests have been dropped because of the aging process, they should be reactivated. It is possible that these persons may develop new interests.

A section in Action for Mental Health deals with convalescent nursing homes for the aged.

> Convalescent nursing homes have long been a facility for caring for the elderly infirm. Only recently has the idea become prominent that nursing homes can be a better solution than the mental hospital for the care and treatment of the aged and aging mentally ill . . .

> At present there is a general absence of nursing homes willing to take elderly disturbed patients. Moreover, those that do accept such patients rarely use rehabilitation or the prevention of further deterioration as their major goals. Generally little attention is given to the psychological and social needs of these patients. Often, too, both psychiatrists and social workers take a dim view of the rehabilitation and treatment potential of these patients. This pessimism is generally hedged by the statement that it is more expedient to use scarce personnel in service to those whose life is ahead of them.[22]

Although at the present time it seems unlikely there will be a call for services of music therapists in convalescent nursing homes, it is hoped that the attitudes concerning these homes will change, and they will be considered as rehabilitation areas rather than as places to wait for the inevitable. It is possible for a ward of elderly people to have an optimistic and forceful program. The psychological and social needs of such patients often outweigh any physical needs they may have.

The general advantages of activity therapy for the aged are reviewed in the _Encyclopedia of Mental Health_.

> Activity therapy geared to aged patients' capacities aims at stimulating minds and bodies and encouraging social activity. Among its many forms are recreational therapy, music therapy, and occupational therapy. Even passive recreation like entertainment may be therapeutic by sparking imagination or arousing dulled interests. Some hospitals feature mixed social dancing in their geriatric service. Many older patients flatly refuse to embark on crafts new to them, but skilled occupational therapists help others to achieve a mentally healthful sense of accomplishment and renewed self-confidence.[23]

One way to arouse these patients' attention is through musical entertainment. If the music therapist is enthusiastic and a good leader, and if the staff participates, it should be difficult for a patient to remain completely passive during group musical activity. Sometimes the attention of these patients may be gained by singing or playing the piano.

Rehabilitation.

> There is a new, active, valuable, and somewhat all-inclusive branch of medicine attracting attention at the present time because, through its efforts, people who otherwise might be condemned to life-long invalidism are being returned to health and a usefulness which restores their self-respect. Known as "rehabilitation," the discipline treats those who suffer permanent limitations because of chronic illness or crippling injury. Since in these areas the emotional outlook of the patient is of prime importance, for both good and ill, the contribution psychiatry makes is weighty and specific, and therefore the subject should be mentioned here.[24]

> Broadening of the range of interests through the wide variety of occupational therapeutic activities available in well-equipped hospitals has resulted, for many patients, in the discovery of totally new areas of curiosity, competence, or striving.[25]

It is important to remember that leisure-time activities may be as important, if not more so, than vocational experiences. Of use in rehabilitation is the teaching of worthwhile leisure-time activities. In some instances, it may mean to help in the vocational rehabilitation of the person who previously had music as a vocation. The main job, however, will be to provide leisure-time activities which will help integrate the person into his community and provide him with emotional satisfaction.

The principles of remotivation formulated by Vaught, Mering, and Kind, and reported by Ewalt and Farnsworth, are fundamental to all phases of rehabilitation.

1. Aides must be made part of the treatment and should share in the responsibility for patient care and improvement.
2. The role of members of the ancillary services should be broadened so as to make them consultants to individual ward programs, resource persons who possess special skills and information that can contribute to a more effective treatment program.
3. To decrease staff-patient "distance" all members of the staff should participate in the patient society by portraying socially acceptable and "normal" standards of behavior on the ward.
4. A change in one aspect of the patient's social life is followed by changes within himself and in other aspects of his social life.
5. Remotivational programs should utilize the idea that the sick can help the sicker and that within patient groups themselves there are potential sources of help toward more mature social action.
6. Specific media in remotivation are not so important as the purpose behind the techniques and the interpersonal closeness of staff and patient in shared activities.
7. Every attempt should be made to introduce activities on the ward that are as normal as possible and oriented toward future life outside the hospital.[26]

Other Treatment Centers

Organizations for Former Mental Patients. The treatment centers in this category have several different names, but all of them are organized around the need for organizations for ex-mental patients. The first of these is the therapeutic social club. In Action for Mental Health,[27] a similar organization called the social rehabilitation center is described. A few social rehabilitation centers for ex-mental patients have been developed. They differ in orientation from rehabilitation centers for the physically handicapped in that social relationships are the major emphasis.

Community Day Centers.

> Day centers were developed as a rehabilitation service for former mental hospital patients. They provided a meeting place for clubs composed of released patients. Clubs of former patients, largely self-organized, fill an important need for mutual aid and support preparatory to engaging in the regular social life of the community. Professional staff additions made possible the organization of social and vocational retraining and guidance activities and supportive psychotherapy, mostly in groups but also on an individual basis.[28]

Residential Treatment Centers. Residential treatment centers for emotionally disturbed children are another new form of treatment center.

> There are centers that provide 24-hour care in a therapeutic milieu for children with severe emotional problems. The program is an integrated one of education, group living, group therapy, and clinical treatment. A principle advantage of these centers over children's units in state hospitals is their proximity to families and the possibility of extensive family involvement in the treatment program. Return to full community living is facilitated by easily arranged transition to day or night services and the use of regular school facilities as the child improves. There is as yet no consensus as to the range of childhood disorders that can be successfully coped with in these centers, or on the size, staffing, and building plans for the centers.[29]

Outpatient Psychiatric Clinic. The outpatient psychiatric clinic is the most numerous community health service.

> It is defined by the United States Public Health Service as a unit that provides outpatient mental health services and has a position for a psychiatrist who has regularly scheduled hours in the clinic and who assumes medical responsibility for all patients. A full-time clinic is one with the equivalent of four full-time professional people including the equivalent of one full-time psychiatrist, one full-time clinical psychologist, one full-time psychiatric social worker, and one additional full-time psychiatric social worker or other professional person. The latter may be a psychiatric nurse, a public health nurse, a pediatrician, a neurologist, an additional psychiatrist or psychologist, a speech therapist, a play therapist, a remedial reading teacher, or a professional with other training related to mental health.[30]

The Five Day Hospital. Another recent development is the establishment of the five day hospital.

> This reflects the practice of many institutions to allow and even encourage their patients to go home on all weekends. This is another phase of the growing tendency to keep patients from remaining in hospitals for a long period of time, or if that is undesirable, to have their stay at the hospital broken up by frequent visits to their homes.[31]

The Night Hospital. The night hospital is another innovation of psychiatric service.

> The night hospital is the converse of the day hospital. It has been described as a psychiatric unit offering treatment to patients after working hours. Its main function is to make treatment possible for persons who work, without interrupting their employment or interfering with their daytime responsibilities.[32]

The Open Hospital. The open hospital is becoming more of a reality than a long-range goal.

> The "open door" to the mental hospital ward and the increased freedom that it brings does not diminish the responsibility of the nurse to provide good care. Patients must be helped to manage their new freedom, helped to find some useful work to do and to plan a more constructive use of their leisure time.[33]

Inpatient Services in General Hospitals. One of the trends in modern psychiatry is for inpatient services in general hospitals. The traditional wide separation of the treatment of the mentally ill from the physically ill is lessening as a result of the steady expansion of general hospital psychiatry.

> Changing attitudes and the efficacy of psychotropic drugs are producing a trend toward dispersal of the psychiatric patients throughout the hospital, with provision for a very small number of secure rooms. . . . Psychotherapy, both individual and group, physical treatment, drug therapy, activity therapy, all are used in well-organized psychiatric units of general hospitals.[34]

Family Therapy. Family therapy is a significant addition to other types of mental health services available in a community.

> A specific therapy for the emotional disorders of the family group, a method of ameliorating the harmful forms of emotional interaction of the individual with his family, fills a critical gap in the pattern of mental health practices. . . . The problems of the family are not the monopoly of any one profession. All interested professional people in the fields of social work, education, psychology, medicine, and psychiatry have a valid claim. Coping with the health problems of the family group is a broad venture in public health. As a matter of sound policy and sheer efficacy, public health services for the family taken as a group call for an integrated health team. . . . Because this method of treatment is relatively new, it is not yet widely available; however, health service of this type is expanding rapidly.[35]

Foster Family. Another way of treating the patient in aftercare programs is through the foster family.

> Foster family care for ex-patients is probably the oldest form of aftercare in this country. Placing a mental hospital patient with a foster family makes it possible to maintain in the community persons who do not need to be in hospitals but who cannot return to their families or live on their own. Many mental hospital patients seem to make further improvement only when living outside the hospital in a normal social setting. Thus, family care is considered as a way of rehabilitating former patients and returning to normal living many who otherwise would remain hospitalized. Family care relieves overcrowding of mental hospitals, it is less expensive than hospitalization, and it often convinces patients' families they should take them back.[36]

Music therapists have much to offer the various therapeutic settings just described. Although general principles may remain the same, there are differences in application and emphasis. It is of importance that new aims and new practices be understood fully. The fuller understanding of the new developments will have to begin with the educational programs of music therapists. Their clinical training, undoubtedly, will need to be more inclusive. Certainly, music therapists will become increasingly aware of the greater integration of community and treatment if they are to be current in their practice. Imagination, improvisation, and continual learning directed toward community centered institutions will characterize the successful music therapist. Awareness of the rapid developments in the field of mental health will enable the music therapist to demonstrate successfully his usefulness to psychiatric endeavor. This, of course, must be done, if he is to be used.

Research and the Future of Music Therapy

If music therapy is to gain status as a profession, one of its greatest needs is to carry out research of significance. Action for Mental Health[37] recommends basic research instead of applied research and long-range as well as short-term projects. Barton[38] suggests that people should be trained for careers in research. A document prepared by a working staff of the Social Science Research Council for private circulation states the long-term goals of research in mental health to be fourfold: (1) the cure of mental illness; (2) the prevention of mental illness; (3) preventative mental health services in a community; and (4) a positive program for improved mental health.[39] Although most research in music therapy has been concerned with the cure of mental illness, these long-range goals of research should be kept in mind, as well as research in the other three aforementioned areas.

> Interdisciplinary research is more productive than the work of a psychiatrist working alone. "Scientific togetherness" is not necessarily more productive than one man's superior ability. Often, however, a psychologist or sociologist, a physiologist or specialists in other areas may add dimensions to the study that enormously increase its value and utility.[40]

Notwithstanding the suggestion that basic research is of more concern, Action for Mental Health does give some advice on applied research.

> In applied, or clinical, research the method, approaches, and concepts used in any one study may be drawn from several different disciplines. The concern is with the prevention and treatment of mental illness and with the development of more effective services for patients.
>
> Primary prevention is an important area for applied research. Many of the specific studies in this area reflect our growing interest in and understanding of the effects of social forces. It must be said that systematic studies are still infrequent

> but topics such as the following are now among the serious interests of applied researchers: the evaluation of mental health education programs, particularly those directed at parents; the influence of various school curricula, different educational policies, and teaching procedures on the adjustment and mental health of children; the effects of large-scale readjustments and changes in the society such as the introduction of automation in industry, the desegregation of our schools, and the relocation through urban renewal projects of large numbers of persons.[41]

One area of applied research, pertinent to the field of music therapy, might be research on the influence of various school curricula in music. If ways can be found in which the music programs in public schools are of value in preventing emotional problems, they should be used.

In summary, if music therapists remain informed of current and predicted trends in the prevention and treatment of mental illness, they should continue to grow as a profession. These new developments should be incorporated in training programs for music therapy students, and registered music therapists should constantly promote their organization so that music therapy will be included in these developments. A broad program of research should be characteristic of music therapy. With the current emphasis on the field of mental health and retardation being promoted by the Federal government, there are grants available for studies that may contribute to the enhancement of mental health.

Social Facility and Mental Illness

Charles Braswell

The manner in which music therapy will fit into the psychiatric treatment centers of the future is somewhat uncertain, but no more uncertain than other adjunctive therapies. Not all of the techniques which have proved effective in residential settings will be of equal value in community clinics. In the acute treatment centers of the future, length of treatment will be measured in weeks rather than months, and therapeutic procedures must be adjusted, or even changed, accordingly. The problem will be to form the necessary relationships in a short period of time.

Psychotherapeutic methods are sometimes divided into two categories. The first of these is termed "reconstructive" and is derived from medical traditions. This method has as its aim the restructuring of the personality, usually through the investigation of early experiences. The second is termed "supportive." It is concerned with the social nature of the individual and seeks to help him adapt to his environment.[42] Sullivan spoke of supportive psychotherapy when he said:

> Thus we try to proceed along the general lines of getting at some notion of what stands in the way of successful living for the person, quite certain that if we can clear away the obstacles, everything else will take care of itself. So true is that, that in well over twenty-five years . . . I have never found myself called upon to "cure" anybody.[43]

Music therapy is generally considered to be supportive as well as educational.

In state, veterans', and private hospitals, a familiar pattern occurs too often. Patients adjust successfully to hospital routine. They perform satisfactorily in music, recreation, and occupational activities. Yet, many of these patients leave the hospital, fail to adjust in the community, and are forced to return. Freeman and Simmons put it this way:

> The doors of the hospital are not one-way exits into the community used solely by persons restored to health and able to take up active instrumental roles and assume the full responsibilities of community life. Instead, they are doors used by both the sick and the well--and revolving doors at that. If the goal of the hospital is merely the temporary dismissal of patients, then perhaps the problem of hospital treatment has been fairly well solved, at least for the so-called functional disorders. Even from an administrative point of view, however, it is clear that the revolving door situation is undesirable. Fewer beds may be needed, but the patients keep them warm for each other. While it is true that the temporary goal of decreased use of hospital facilities is being reached, there can be little argument but that it is transitory at best. As an ultimate accomplishment, there is no virtue in transforming mental hospitals into way stations or holding operations.
>
> The problem, then, of the former mental patient and of his tenure in the community is of major concern.[44]

This problem has been one of the main reasons for the development of the community treatment concept, and a major goal of community clinics will be either to help patients adjust in the community or to help them create new environments in which some satisfactory maintenance can be achieved.

"Adjustment" primarily concerns the patient's relations with his family, his job, his individual relationships, and his participation in a varied and satisfying complex of group interactions, both formal and informal. Secondary considerations include his mode of dress, his manner of meeting people, his ability to assume varying social roles, and his fund of specific social skills (such as dancing, singing, card games, or athletic accomplishments) which could enable him to gain entrance to and find acceptance in certain community social organizations. Social skills and techniques contributing to adjustment can be termed, collectively, "social facility."

The various components of "adjustment" are difficult to isolate and to study objectively. Most of the studies reported ignore the components and simply measure the individual's participation in formal and informal associations. Much of the literature deals with the relationship between social participation and adjustment. However, amount or degree of participation also has been correlated with age,[45] occupational adjustment,[46] scholarship,[47] socioeconomic status,[48] rural versus urban residence,[49] etc.

There is no contention that social isolation causes behavioral disorders. The contention is that *there is more than a chance relationship between social isolation and behavioral disorders*. The evidence to be presented shows that, with the majority of subjects studied, the greater the social isolation the less healthy (in terms of adjustment) were the subjects. No therapist can afford to be unaware of the values of social facility.

Goldhamer studied the relationship between membership in formal associations and neurotic score, as measured by the *Thurstone Neurotic Inventory*. It was found that as the degree of neuroticism increased, membership in formal associations decreased.

> The inverse relationship between membership frequency and total neurotic score demonstrates that even the segmental and relatively formalized relations involved in associational activity are not immune from the circumscribing effect . . . of deviational personality traits. The socially constrictive influence of such tendencies in the personality may in fact be even more prominent in the case of segmental, secondary relations than in the case of more intimate relations, since in the latter instance a greater possibility of an assortative development of social relationships based on more intimate understanding and compatibility exists.[50]

Essentially the same results were reported by Fraser who found that the "incidence of neurosis steadily increased from the group [of factory workers] with many social contacts to the group with social contacts under average."[51] In comparing background factors of 50 delinquent and 50 nondelinquent boys, Francel found that "in eight out of ten comparisons on categories of participation in some form or other, the nondelinquent group displayed greater participation than did the delinquent group, both as individuals and in family experience."[52] Chapin used the *Rundquist-Sletto Adjustment Scale* to measure the relationship between personal adjustment and participation, and found that "the evidence of three experimental studies shows that high degrees of community and personal adjustment are associated with a higher degree of social participation in the groups and institutions of the surrounding community."[53] Tolor and Boitano[54] measured differences in social attitudes of patient and nonpatient groups. Seven stimulus words were presented to the groups, each word having five socially desirable and five socially undesirable descriptions. It was found that the patient group endorsed significantly fewer socially desirable items than nonpatient groups. Jaco[55] attempted to test some aspects of the relationship between schizophrenia and social isolation. A southwestern city was divided into areas having high and low incidence of schizophrenia. These areas were chosen on the basis of patient records obtained from a local state hospital. It was found that samples taken from high-incidence areas exhibited significantly greater social isolation than samples taken from low-incidence areas. Individuals in the high-incidence areas knew the names of fewer neighbors, had fewer friends and acquaintances, and belonged to fewer social organizations. A study, recently reported by Langner and Michael, includes a section on social participation. Each subject was asked to report "the number of his close friends, the number of organizations to which he belonged, and the number of neighbors with whom he was friendly . . ."[56]

> The number of the respondent's close friends was very highly associated with mental health risk . . . having no friends . . . involved considerably greater risk than having two to fifteen or more friends.
>
> . . . .
>
> The number of organizations whose meetings the respondents attended was only moderately related to mental health.
>
> . . . .
>
> Those friendly with ten or more neighbors ran less than the average /mental health/ risk.[57]

Hill,[58] in a study investigating the relationship between social participation, social adjustment, and scholarship, used two matched groups, each containing 266 college students. Students were matched according to scholastic achievement and degree of social adjustment. Adjustment was measured by the Washburne Social Adjustment Inventory and a Guilford adjustment scale. Members of the experimental group were encouraged by a university guidance staff to participate in a number of extracurricular activities. At the end of the experimental period, the two groups were again tested. The experimental group showed an increase in both scholarship and personal adjustment scores. Comparable results were reported by Livingood.[59] Another study dealing with social participation was reported by Rose[60] who hypothesized that persons whose social participation is limited should exhibit some degree of individual personal disorganization. This hypothesis was confirmed by reports from 219 respondents. Halmos[61] investigated the relationship between the frequency of social contacts and certain traits measured by two personality tests. Anxiety and depressive symptoms were more evident for those subjects having fewer social contacts than for those participating more fully in social activities.

Some partially contradictory evidence also has been reported. A recent, extensive study by Freeman and Simmons deals with posthospital experiences of former mental patients. The authors used a follow-up period of one year after hospitalization as the criterion for success or failure. Those patients who were able to remain in the community for one year were termed "successful," and those who were admitted again to the hospital before the end of one year were designated as "failures." One part of this study dealt with social participation. The four types mentioned were "participation in voluntary associations, social activities with friends, social activities with relatives, and participation in religious activities."[62]

> Among both male and female patients, few are members of voluntary associations, and even they rarely participate in them. Both membership and participation are higher among male than female patients, and among successful than unsuccessful patients. Among males, membership and participation predominate in religious, veterans', and fraternal organizations. Among females, both membership and participation are concentrated in church-affiliated groups. Friendship patterns were elicited by a number of questions regarding visits to other persons and to the home, and whether or not the patient was accompanied by other family members. Of most interest is the finding that, among successful patients, approximately 25 percent of the male patients and 20 percent of the female patients lived in virtual isolation from friends, in that they neither visited nor were visited during their twelfth month in the community. Among the failures, the proportion is somewhat higher; about 30 percent of the males and 25 percent of the females neither visited nor were visited in the month preceding their return to the hospital.[63]

The authors stated that these findings were confirmed in a study by Dinitz, Lefton, Angrist, and Pasamanick.[64]

From these studies, it can be seen that the seemingly nebulous concept of "adjustment" is related to social participation. Eleven studies confirmed this; two did not. The investigation by Freeman and Simmons, as well as the one by Dinitz et al., failed to find clear-cut evidence that social participation is related to success or failure on the part of returning patients.

The reason for the discrepancy might be that the 11 confirming studies used subjects, most of whom had not been hospitalized, while those not confirming the hypothesis used subjects who were, or had been, hospitalized for behavioral disorders. Few returning mental patients, successful or unsuccessful, were found to be engaged in normal social activities. Furthermore, many of the successful patients lived in near social isolation. In other words, in the two nonconfirmatory studies, there was not enough contrast between successful and unsuccessful patients to report a notable difference. It is possible that former patients often were rejected by individuals and organizations in the community. The evidence is conflicting.

Public attitude toward the mentally ill may be changing. For example, in a mental health bulletin it is stated that "an ever-increasing number of people are beginning to manifest a heightened degree of interest in and sensitivity toward the needs of the mentally ill. This represents an extraordinary reversal of the predominant public opinion and attitude of only a few years ago."[65] Ridenour reports that a recent opinion poll indicates that the public is "more willing to be taxed for the care of the mentally ill than for any other major public service."[66] However, a study by Whatley[67] reports a number of pessimistic conclusions about public attitudes toward returning mental patients. The study conducted by the Joint Commission on Mental Illness[68] strongly supports this negative view.

There is probably a more important reason for the lack of social participation by convalescing or former mental patients. Experience indicates that many returning patients possess asocial characteristics which inhibit their acceptance in community groups. In such cases, even those who make initial attempts to join social organizations drop out after a few rebuffs. It would seem that the "participation" evidence is worthy of serious consideration. Although the merits of social facility suggest some modifications for hospital activity programs, their major usefulness should be to those music therapists who will work in community clinics. From the hypotheses relating adjustment to participation, at least one type of program is indicated. The first step would be accomplished by the social worker. The history of each patient would include an accurate picture of his home, immediate community, and social environment. Included in this history would be the church, civic, and neighborhood social groups for which the patient would be eligible at the conclusion of treatment. Secondly, the music therapist, along with other personnel, should make as complete an assessment as possible of each patient's specific social skills. These skills would include anything which might help him be accepted in available community social organizations. From this profile of skills and available organizations, an individually designed, realistic program of activities could be initiated to correct whatever deficiencies exist, so that the patient, for the first time, or once again, might function beneficially in a group.

In planning for the patient's return to the community, the partial failure of some hospital programs for some patients should be noted. We speak of "resocialization," but the highest level of performance expected in hospital activities seldom approaches levels that would be demanded in comparable community groups. It is, at times, forgotten that patients probably will be expected to conform to community standards of performance. In order to help bring the patient to these standards, interpretation of behavior, within limits, could be another function of the music therapist. If inappropriate dress or unacceptable modes of social interaction are noted, these should be reported in staff meetings or discussed with the patient, depending upon the policy of the treatment center. Unacceptable social interaction usually cannot be seen as clearly in formal psychotherapy as in a music therapy setting. Reports of patient-patient, patient-group, and patient-therapist interactions would provide valuable data for the psychotherapist.

The suspicion that such a program might be "superficial" may well exist. How can a music therapist, dealing with patients for a period of from three to six weeks, contribute significantly to patient recovery and bring about meaningful relationships? The answer is that these groups will be continuous; new patients will be entering and old patients leaving. If proper structure is maintained, then group feeling can be maintained. Another aspect of the question can be answered by evidence from the Langner and Michael[69] study. These authors suspected that "the degree of social contact involved in . . . spare-time activities was . . . related to mental health." Activities were divided into solitary, small-group, and large-group categories. On the basis of activities reported, each subject was put into one of these three categories. Those engaged in large-group activities were better mental health risks than those engaged in small-group activities. Those that fell into the small-group category were better risks than those engaged in solitary activities.

Now that the movement from the traditional institutions has begun, music therapists will want to know how they can best fit into the new treatment settings. To make music therapy useful to psychiatrists, there must be good understanding of community centers and related new orientations. Although the basic principles of music therapy still maintain, new techniques and skills will be necessary. Competent clinical practice will be achieved best when there has been carefully organized research and systematic study on a broad scale.

Clinical Descriptions

The following descriptions were written by practicing music therapists. The practices and settings described differ from traditional forms of music therapy, and may indicate directions in which music therapy will grow in the future.

Marsh writes of an insular music therapy program that was transformed into a community activity in a state hospital. The techniques employed are relatively simple and would be applicable in many institutions. The setting described by Glover is experimental, something new, for immediate psychiatric services. It is a state hospital's attempt to serve the community in a less formal manner. Spicknall's paper describes the work of a music therapist in special classrooms of a public school. Music therapists have worked with exceptional children for a number of years, but usually on a referral basis or within a specialized institution. A different aspect of the use of music therapy with exceptional children is reported by Crocker. Crocker's work covers purposes ranging from the eliciting of biographical data during musical improvisations (often the use of the resultant music as a projective technique) to the initiation and reinforcement of positive behavior patterns. Her approach allows professional cooperation with psychiatrists and clinical psychologists.

Another community music therapy service is reported by Tyson. This paper discusses the history, goals, and organization of a creative arts rehabilitation center in a large eastern city. Her program aims for comprehensive coverage by the use of a number of music therapists, each a specialist. Alvin's paper is concerned with the community psychiatric movement in England. The development of community treatment services was begun in England before it was in the United States. Music therapists in England have had more time to adjust to the changing concepts and patterns of patient care. Folsom describes her experience with an outpatient chorus. Although Gaffney and Christman worked primarily as music therapists, the particular clinical work they describe was not music therapy. Gaffney's paper about her intern experiences provides an account of a music therapist working on a ward structured as a "therapeutic community." The familiar concepts advanced by Jones are in evidence,[70,71,72] but the emphasis is on Gaffney's function as a rehabilitation therapist, rather than a music therapist. A similar emphasis is to be noted in Christman's paper. Christman found it necessary to leave the security of musical media for the less familiar complexities of verbal media. These papers are important because they illustrate two of the several roles that music therapists sometimes are requested to assume. These functions are not trends in music therapy, however excellent the work of Gaffney and Christman.

A Hospital-Community Music Therapy Program

Carol Marsh

In a state hospital in the South, civic, social, and professional clubs have worked closely with hospital authorities to provide services for patients. Shortly after the music therapy department was organized, a way was sought by which patients assigned to the music department could participate in community activities. It was felt that occasional performances by patient music groups outside the hospital would be helpful, but there were obvious dangers involved. Patients might feel that they were being exhibited, and community organizations might invite patient groups merely to have a novel attraction.

In order to solve this problem, all patients participating in music therapy activities were gathered into one organization called the Melody Music Club. In 1955, this group joined the National Federation of Music Clubs. The affiliation immediately changed the atmosphere of the music therapy department. The patients no longer felt isolated, nor did they feel that they were being exhibited. They were now members of a functioning unit in a national organization. Since its federation, members of the club have performed throughout the state. Several other clubs have set aside time for one program a year from the hospital group. Patients perform for civic clubs, hospitals, nursing homes, and even provide music for style shows sponsored by civic organizations. Patients also attend events and performances in the community. Considerably more than performance is involved in these activities. Patients feel a sense of identity with the community. In order to maintain community acceptance, they must conform to accepted modes of dress and behavior. Perhaps the most important result of this program is that patients make friends and become accepted in community organizations. When they leave the hospital, there are organizations which will welcome them as members. In this way, the music therapy department serves not only in a rehabilitative capacity, but also helps to make the transition from hospital to community less threatening.

Immediate Psychiatric Service

Ray Glover

In this age of accelerated living, people have asked for and are getting immediate psychiatric service on the walk-in unit of a state hospital. This type of service is unique because more treatment resources than a community clinic might have are available from the hospital staff and facilities. Anyone may seek psychiatric help at any time by walking into the unit. Clients are seen immediately by one of the staff, which consists of a psychiatrist, psychologist, social worker, nurse, and aides. Future plans call for the addition of an adjunctive therapist to the team. This staff member would be responsible for the activity program, and should be qualified in several fields including music, recreation, and occupational therapy.

Admission to the 15-bed unit does away with much of the "red tape" connected with admission to the hospital itself. The patient's stay on this unit may last as long as the interview takes, or up to three weeks. Frequently, there is a radical change in the patient overnight, with a relinquishing of symptoms which brought him into the unit. Others may improve rapidly in a few days. Although this is a frequent phenomenon on all wards and in all psychiatric hospitals, the patients on the walk-in unit can be changed to outpatient status or be dismissed very quickly, compared to the same procedures with regular hospital patients. If further treatment is needed after the three-week period, the client may be admitted to the hospital as a regular patient.

An important part of the treatment goal on this unit is to involve the patients in as many things as possible in their brief stays. Most activities are in groups; included in these are group therapy, discussion groups, recreational groups, and music groups. Other forms of treatment include chemotherapy, individual psychodiagnostic interviews, and special milieu programs.

The music groups consist of group singing, record listening, and individual performances for the group, on the ward and in the music clinic, three times weekly. The goals are motivation, furthering group cohesiveness, socialization, and providing socially acceptable emotional outlets. Observation of the group by the staff is also an important aspect. Much can be learned about the extent of the patient's illness from the degree and type of participation in the activity. In this accelerated setting, the staff must learn as much as possible about the patient in a short time. There is usually a friendly, relaxed atmosphere during the music period, and the response by the patients is usually enthusiastic. The unit director has stated:

> I wish we could have more music on the ward as it helps to orient the new patient to the kind of atmosphere we want the ward to have, that is, a cheerful, hopeful, active environment where it is possible to enjoy living for a while. This is but one of the many purposes music serves on this unit.

The Function of a Music Therapist in a Public School Special Education Program

Harrold W. Spicknall

The special education program in the public schools of a large midwestern city serves children of preschool through high school age, who belong to the following groups: (1) educable retarded; (2) trainable retarded; (3) physically handicapped; (4) deaf and hard-of-hearing; and (5) emotionally disturbed. The music consultant for special education serves in several ways.

1. Collecting, developing, and disseminating musical materials and techniques that will be of specific use to the teacher of the handicapped. These materials and techniques are found by searching the literature and by conducting studies or experiments.
2. Making regularly scheduled visits to all classrooms.
    a. Demonstrating various techniques through which music can be used to reach specific goals.
    b. Observing the teacher and offering suggestions for further use of music with her group.
3. Conducting in-service training workshops.
    a. Acquainting teachers with the rationale and techniques for using music with handicapped children.

b. Helping the teachers acquire music skills that will be of use in their classrooms.

The education of the "whole child" is necessary to produce an adult who is able and willing to lead an interesting and rewarding life in the community. Sometimes special educators focus so much of their attention on training for a job situation that they forget that the student will spend at least as much of his time at leisure as at work. To develop an adult who is able to hold a job is not sufficient.

The general goals of music therapy in special education are consistent with the goals of special education. The major goal of the special education program is to help each child become as independent and self-sufficient as possible. The specific goals of music therapy in the special education program are: (1) to aid social adjustment; (2) to strengthen self-concept; (3) to help create a pleasant educational atmosphere; (4) to promote beneficial use of leisure time; (5) to help develop physical coordination; and (6) to help develop listening skills.

The music therapist in a public school special education program is often called upon to fulfill three roles. He must serve as a resource person for special education teachers, a music teacher-therapist, working directly with the children, and a researcher, developing new materials and techniques.

Music Therapy in a Private Music Studio

Dorothy Brin Crocker

Referrals of patients for music therapy generally are made to music therapists in hospitals, special schools, or outpatient settings, where the emphasis is on rehabilitation. The private music therapist is involved in like manner, but there is also an emphasis on prevention of mental illness that is seldom found elsewhere in music therapy. This liaison with preventive psychiatry merits consideration, especially with children. While such functions of the music therapist may be classified as nonmedical services, they are rehabilitative or preventive, and they are beneficial to the individual, to the source of referral, and to the community.

The music therapist follows the treatment goals set by the person or agency making the referral. The music sessions are structured to provide the establishment of a good therapeutic relationship between music therapist and patient. Thus, music sessions become therapeutic musical and emotional experiences. The therapist is interested primarily in indications of troubled areas and secondarily in guiding musical growth. There are times when a modification of faulty attitudes or behavior can lead to progress in music. There are also times when an emphasis on musical progress can lead to better mental health. The music therapist should be aware of the pitfalls in a program structured either too loosely or too rigidly; yet he must take advantage of possible flexibilities in order to develop the music activities into constructive sessions.

Referrals have been made for various reasons. One clinical psychologist lists her reasons.

> Except in cases where a psychotherapist can see a child patient almost daily or in cases where child psychoanalysis is possible, it seems highly practical to extend the therapeutic experience into other areas of life where the actualization of the therapeutic relationship can become more meaningful to the child. Adjunctive therapies may be in speech, reading, or other academic areas, music, dancing, or similar appropriate activities for the child. More important than the type of activity or the subject matter is the personality of the individual conducting the adjunctive therapy.
>
> A decision which must be made on the basis of the individual patient has to do with whether highly structured adjunctive therapy is advisable or loosely structured and permissive adjunctive therapy. Music therapy offers the possibility of modification of some of its dimensions according to the need of the individual patient. For this reason, a music therapist may offer a reinforcement of the gains which can be derived in individual psychotherapy. . . .
>
> A second important reason for making use of music therapy with young children lies in the possibility of their seeing their fantasy, their private world, their creativity accepted as having validity and as being worthy of expression. . . .
>
> A third reason for advising music therapy for a young child, particularly when the cooperative therapist is warm and somewhat maternal in attitude, is in the opportunity of extending the child's experience with an accepting, flexible, and perceptive mother surrogate. . . .
>
> A fourth reason for utilizing the services of a musical therapist with disturbed children is derived from the connection that the experience makes between the child and the broader cultural environment. . . .
>
> In short, the extension of a positive, growth-producing experience beyond the hour or two a week scheduled for individual psychotherapy can be made possible specifically through the adjunctive efforts in music therapy through which the child's adjustment to external controls, his gradual incorporation of control patterns, his satisfaction of dependency needs, the enhancement of his own sense of worth, and the sense of identification with the broad world beyond himself stimulate and promote the integration or the healing process which can make possible the restoration of healthy growth patterns.[73]

This psychologist has referred children with the following problems and disabilities: inability to trust anyone; inability to gain acceptance from peers; lack of control over impulses; low frustration tolerance; difficulties in completing a task; hyperactivity; and brain damage. The psychologist indicated that the children needed clearly defined, consistent limits set for their performance and for their behavior during the music periods. When these limits were defied or tested, the music therapist rejected the behavior, yet continued to accept the child and helped him conform to expectations.

One psychiatrist, who has referred children for music therapy, believes that playing a musical instrument enables the performer to express feelings that might result in neurotic symptoms if an acceptable outlet is not provided. Another psychiatrist concurs in this opinion by referring the children of some of his adult patients. He requests that improvisation be taught so that the children can vent some of their pent-up feelings of tension, frustration, and confusion, created by a disturbed parent-child relationship. Techniques employed included the use of harmonizations played in solid chords, arpeggios, Alberti bass accompaniment, chords played on the off beats, Latin-American rhythms, etc. These modalities of expression result in feelings of gratification for music accomplishment as well as outlets for emotional expression.*

A pediatrician recommended several nervous, overly conscientious students at school, for piano instructions with a music therapy approach. His discussions with the parents helped them gain an understanding of their unrealistic ambitions to make the children compete in order to be outstanding. The music therapist helped these children learn to work one step at a time, and not to be overwhelmed by the enormity of how much there was to be learned. Gaston has stated:

> If one subscribes to the thesis that status in our civilization is secured by success through personal competence, then music fits and is acceptable. It may supply the highly essential self-gratification so necessary to security and the consequent lowering of anxiety, and yet provides it, for the most part, in a noncompetitive fashion. Music participation allows a compromise of psychic drives in an activity which has order and predictability. These benefits are important to all children.[74]

The children who had been referred benefited from using music as nonverbal communication.

An orthopedic surgeon sent a six-year-old cerebral palsied girl with motor involvement of both legs necessitating braces and a wheelchair, right arm involvement, and a moderately severe speech problem. To give variety and to relieve some of the monotony of the repetitious exercises, songs were composed with a text containing the directions for the exercises. Songs also were used to supplement her speech therapy. She derived much pleasure from the musical games for her arm exercises, but learning to play short pieces with her left hand was her most gratifying accomplishment.

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*The Robert Pace Piano Series can be used as a guide for therapists not adept in teaching improvisation.

Much can be learned about a child in a music lesson by observing how he responds to music, views himself, accepts criticism or praise, relates to the teacher and children, accepts or resists authority, controls impulsivity, and tolerates frustration. The private music therapist frequently can be of help to children who cannot tolerate limits and are anxious and fearful.

Several children were enrolled as beginning piano students, and several other children were assigned to either a music appreciation group or music readiness group, with one group lesson a week and one private lesson for each child. The 60-minute readiness group lessons emphasized rhythmic activities such as clapping, marching, walking, jumping, hopping, galloping, and rhythm band; singing and the dramatization of feelings about attitudes and behavior. The music appreciation groups included playing flutophone, autoharp, drum, guitar, and creative movement. Attempts were made to meet individual needs; however, the group needs took precedence. The music therapist was reassuring and supportive, sharing the musical experiences in an atmosphere that gave the impression of enjoying the group and its members. Approval was given when signs of control over feelings of frustration were noted. Attempts were made to relieve guilt feelings and bolster inner controls. The external controls were not so rigid as to be inhibiting. Unrestrained expressions of hostility and aggression were not permitted because of the threat to group unity. The leader functioned as a protector in a directive manner. Praise and encouragement were given in every way possible. Discouragement was not used as motivation, and negative attitudes or behavior patterns were discouraged. Songs and music instructions, easily learned, were first presented to establish group unity and feelings of sharing a common goal. As songs and music activities of increasing difficulty were presented, the group had the opportunity of working together to reach more advanced goals. This meant that frustration tolerance was tested and raised, satisfaction was felt over completion of a task, and self-esteem increased as errors were corrected, without arousing feelings of inferiority or rejection.

In the weekly piano lesson, each child was given pieces that were on three levels of difficulty. (1) Learning the easy ones developed feelings of confidence and built a repertoire that could be used for communication and self-expression, and to improve finger coordination and technique. (2) The pieces of medium difficulty were more challenging and provided a means of analyzing work habits and weaknesses which arose. Since the music was more satisfying, several secondary treatment aims were evident: sublimation; externalized interest; gratification; and increased attention span. Learning pieces neither too simple nor too difficult agrees with Barnard's statement about playing scales.

> This can be an experience in adapting oneself to authority and following prescribed rules for an impulsive anti-social person; it can be a creative experience for the person who has never done anything for the sheer pleasure to be derived; it can be a gratifying experience for the person burdened with an "I can't learn anything" attitude; it can be a task to perfect for the compulsive person; it can be a medium for aggressive pounding and banging where needed; it can be a never-ending task for the guilt-ridden person; it can be a stepping stone to verbal communication for the withdrawn person; and so on with endless variation.[75]

(3) The pieces classified as too difficult presented a long-range goal that brought its own rewards, but also resulted in frustrations and defensive reactions. When the child is denied the satisfaction of seeing the therapist reacting to his expressions of frustration in a retaliatory manner, these feelings take on a different significance. This is illustrated in the following case history.

Case 1. Ten-year-old C had normal musical intelligence. She sang well and showed definite interest in learning to play the piano. In group music, she presented no discipline problem but was quiet and withdrawn, followed directions hesitantly, and participated passively. She did not relate to the other children except in a superficial way.

In her private piano lessons, she was sullen, moody, resentful of corrections, and acted rudely. She squirmed and stretched constantly; on occasional lessons, she would stop playing and half sprawl to put her head on the back of the keyboard every eight or ten measures. She antagonistically insisted upon fingering the way she wanted, regardless of corrections or explanations as to why certain fingerings were better. The psychiatrist's instructions were to fail to react to the child's hostility with anger and nagging, to limit the lesson to the length of time she kept her head off the keyboard, and to refrain from intense arguing.

Pieces with simple fingering were chosen, and C was told that the indicated fingering made the music easier, but that there would be no further correction of her fingering. This eliminated some of her need to defy authority and test adult reactions. As C gained insight into her behavior patterns through guidance, she modified her behavior and no longer tried to force adults to become angry and hostile with her. This had been a way of justifying her own hostility. It lessened her guilt over ambivalent feelings of hate and love for her mother.

In private sessions, the conversations following the lessons revolve around the way a child feels about the music, his ability, and his relationship with the music therapist. The discussion about music problems and how to handle them carries over to a discussion of responses to other problem situations. This is reported to the psychiatrist. One child said, "You are the only person who believes I can learn hard things. Everyone else makes me feel like something is the matter with me." Another remarked, "I was afraid to choose my pieces at first, but now I like to make choices." Another child, who was afraid to assume responsibility and make decisions, was encouraged to select the chords he liked for harmonizations and select the fingering for his pieces. He was extremely dependent at first and worried over the accuracy of his choices. With much encouragement and lack of criticism, he slowly improved. His parents reported later that he began to select some of his own clothes and occasionally suggested playing a game to his peers. His psychiatrist said he was less concerned with whether or not he measured up to expectations. He first was able to trust the psychotherapist, then the music therapist, then parents and siblings, and, cautiously, one or two children of his own age.

Stories to improvised music requested by a child have been a successful music therapy approach for several years.[76] Many stories such as the following are given to the psychiatrist to use as springboards for discussions in psychotherapy. The child is told that the story is an interesting response to music and asked if he would like to have it shown to the doctor.

When 11-year-old M was asked what kind of music she wanted to hear, her reply was "sad music." An improvisation was played on the piano. M said the following is what the music caused her to think:

> Once there was a little girl, and her name was Judy. She was a very sad little girl because nobody played with her. She decided she would try to make some friends, but she just couldn't do it. So she kept on trying. She was so determined that one day she asked her mother how would she ever get people to like her? So she tried what her mother told her. She kept on trying until one day everybody decided to like her, and when everybody liked her, they played games with her and talked to her. They never fought with each other again.

The first part of the story accurately expressed her desire for friends, but the latter part was fantasy and wishful thinking. She was not accepted by any of her peers. She was so threatened by closeness that she was unable to relate except in a superficial way to either psychotherapist or music therapist.

N, age ten, requested a "happy piece." A gay dance was played. He told the following story:

> Well, once there were these people, and they didn't believe in God. They didn't have any religion, and so anyway they went outside and they started worshiping. They had a god, and it was called Amonia. They started worshiping him, and a bolt of

> lightning came down. At the end of the bolt of lightning was a donkey. And the donkey's name was Miranda, and Miranda belonged to Ted. And the donkey picked up his heels and went over and killed the god. And so they worshiped Jesus from then on.

His psychiatrist thought that, in addition to bizarre thinking, N was disturbed over some religious teachings.

T, age 12, told the following story to mildly stimulating music:

> He killed himself because he was unhappy so much. He killed himself. Once upon a time there was a little boy, and he killed his parents, and so he got the gun in the house, and he killed himself because he hated them because they made him go to a school he didn't want to because they thought he had problems. They thought he had emotional problems because he couldn't get along with people. He was always fighting and teasing and having fits--getting mad and screaming; so he killed them. They made him go to this school, and they started to hate him. His parents hated him so he killed them. They sent him away. They just wanted to get rid of him so he went home and found his father's shot gun and some shells with it, and he went upstairs and loaded it and killed them. He blew their heads off. His brothers and sisters probably hated him. They'll probably hate me if I do it.

T's psychotherapist was getting the same kind of verbal aggression and wishful thinking, in addition to much acting out. Yet this boy was able, in time, to gain insight and self-knowledge. He became better integrated and able to function in a healthy manner.

In conclusion, the music therapist can function effectively in a private studio if a therapeutic relationship is established with the referred patient, and if treatment aims are given precedence over musical goals. Reports should include observations of the child, his attitudes and behavior, and evaluations of the degree of talent or lack of it. The music therapy sessions may be part of a rehabilitation program or part of a preventive psychiatric program. Although this paper has discussed music therapy with children, patients of all ages can be accepted as referrals.

The Community Music Therapy Center

Florence Tyson

The re-entry of psychiatry into the community[77] has made it possible to develop music therapy as a community-based rehabilitative modality.[78] The music therapy center is a pioneering program, and a description of the experience accumulated in establishing and evolving a community service may provide constructive directions for similar efforts.

The music therapist's range of influence and responsibility tends to increase as he moves from the hospital into the community. Music therapy in the hospital usually functions as one of many adjunctive services in a total treatment setting. However, when the music therapy program is established on an independent basis, new dimensions are added. Members of the professional community may hesitate to refer their patients to the independent music therapy center. The hesitation often reflects an unwillingness to "pinch off" patients from the central milieu and expose them to an independent ancillary treatment which might interfere with, or operate at cross-purposes to, the ongoing basic therapy.

The patient and the music therapist are more vulnerable and exposed in the community than in the hospital. The outpatient has to contend with complex, and sometimes frightening, realities involving family relationships, vocational training or job-seeking, and social isolation; he is often overwhelmed by recurrent failures and ensuing despair.[79] The music therapist has to work with patients who are frequently more upset, volatile, or threatened than their counterparts in the hospital; there is an increased possibility of savage verbal attacks or of impulsive acting-out behavior; there may be frantic telephone calls or visits when a patient cannot contact his psychiatrist; there is the possibility of calls threatening suicide; and there is sometimes an impulse on the part of the patient to drop psychotherapy and discontinue music therapy. What assurance is there that the music therapist can cope adequately with such possibilities inherent in the community situation? Does an independent music therapy service have a meaningful and useful enough function to justify its existence in the community? The simple transfer to the community of the departmental operation as it is known in hospitals will not suffice.

Music therapy acquires different dimensions in community practice. The music therapist seems to become even more aware of the patient as a "whole person," and of the fact that each interpersonal contact may have immediate and crucial implications for the patient's total life situation (it is not merely a question of his adjustment on a sheltered hospital ward). The constant impinging of the entire community environment on the music therapy contact creates the necessity for a broad framework within which music therapy can serve the outpatient's needs.

In the hospital music therapy department, one goal is the resocialization of the patient. The community music therapy center has the same goal. The music therapy center provides a milieu for the promotion of social rehabilitation--the "agency" concept. While the rehabilitation objectives prescribed by the patient's psychiatrist continue to be served in individual weekly sessions, there is also an intention to stimulate and implement interaction among the patients referred for individual work. This interaction occurs among a patient population having a much wider range of diagnoses than that of the hospital music group.

It was found that the goal of socialization could not be reached when the music therapy program consisted of a single music therapist having consecutive appointments with individuals. As the number of patients increased, two or three music therapists held concurrent therapy sessions, and social interaction of the patients began in the waiting room. The patients, waiting for their appointments, sat, stood, or paced about without communicating. Several compulsive talkers "broke down" the reserve and stiffness of some of the patients, but also disturbed and irritated others. Patients became acquainted with each other, and the variety of individuals present was broad enough to allow friendships to develop. The variety of choice for friendship expanded during preparations for the center's semi-annual musicales. These musicales resulted in strikingly improved social interaction among new combinations of patients.

As the program developed, patients began to feel an identification with the center and looked to it to help gratify expressive and creative needs. A recorder group, a vocal group, an art group, and a dance group were formed at the request of patients. The groups were organized at the level of the patients' capabilities. Although community music therapy may follow a similar programming pattern in other cities, the course of internal developments will probably vary according to the needs of the patients in each program.

The music therapy center could not serve the community successfully until its staff was extensive and competent enough to meet a variety of musical and therapeutic needs. Hospitalized patients tend to respond in a more passive way than nonhospitalized patients. The patients in the community, some of whom have had advanced musical training, often challenge the music therapists' qualifications and training. In such cases, the patient's skepticism and conflicts seem to be overcome most readily by a demonstration of the therapist's musical performance. The first concern has been to meet the needs of the patient, who often perceives these needs to be musical (therapeutic and interpersonal needs are often denied by the patient). The outpatients seem willing to spend the necessary time, effort, and money only if they perceive music therapy to be meeting their needs.

Therefore, the staff of the music therapy center includes therapists capable of teaching instruments, voice, theory, composition, and keyboard harmony--both popular and classical--at beginning, intermediate, and advanced levels. There is a therapist whose clinical speciality is working with exceptional children, and a number of the therapists are skilled in small-group singing, ensemble-playing, and music-listening techniques.

The staff includes a sufficient number of both sexes of various ages so that patients may be assigned to therapists in accordance with the referring physicians' recommendations and/or the patient's wishes. Unless there is sufficient variety of choice, the patient's negative reactions ("she reminds me too much of my mother") sometimes prevail over his interest, in which case he may drop out of the program. A majority of the staff members of the music therapy center became registered music therapists on the basis of experiential equivalency. Almost all of them have been educated to the master's level, and most have had professional careers as instrumentalists, composers, or teachers. This breadth of experience has proved to be of value, because sometimes the young therapist who has only an undergraduate music therapy degree has difficulty in meeting the musical demands of the musically advanced patient.

The second concern has been the growth and acceptance of the music therapy center on a community-wide basis. It seemed that the program was accepted more readily by the lay and professional communities when few musical limitations and restrictions were placed on admissions. Acceptance of the music therapy center was slowly won--patient by patient, physician by physician, agency by agency. With each successful individual contact, growth of the service was abetted in a most effective way--by word of mouth.

For maximum therapeutic effectiveness, the music therapy staff should meet regularly with a consultant psychiatrist. There are many questions and problems encountered in working with the patients which require clarification and guidance. The music therapist's consultation needs may revolve about problems of the setting of limits, personal prejudices or characteristics which consciously or unconsciously interfere with the development of a positive therapeutic relationship, disagreement with the referring psychiatrist's point of view, or an incomplete understanding of the behavioral dynamics involved in a particular case. The music therapist must be careful not to work against the instructions of the referring psychiatrist and thus unwittingly add to the patient's confusion or ambivalence. The therapist must guard against being taken in by the patient's resistance to treatment. These are eventualities which can be clarified, rectified, or avoided if regular consultation is provided.

Some of the questions which face music therapists in the community are the following. How can the music therapist work adequately with a patient if the referring agency has not provided sufficient background information? (To protect confidentiality, sometimes the diagnosis is indicated merely as "mental illness.") What happens when the patient already in the music therapy program is suddenly without his own psychiatrist? Should there be an automatic cut-off date for the term of music therapy treatment? What are the determinants for dropping a patient from the program?

As the program grew, additional professional staff members were needed. Among these were a part-time psychiatric social worker (to expedite referrals and liaison with referring agencies, to handle intake, and to write up the periodic progress reports to the referring sources), a consultant in psychiatry (for staff advisory needs), a consultant in psychology or sociology (for research needs), and activity therapists (for group work).

The use of volunteers required care and discretion. Many individuals trained as teachers or performers were attracted by the community music therapy setting and were eager to serve. Traditionally, the use of volunteers has been an important means of maintaining the interest of the public-at-large. However, it is rare to find a volunteer whose background combines the required therapeutic orientation and practical application. The decision in each case rests upon individual merits.

Successful rehabilitation "requires a coordinated effort by many professions, agencies, and community resources."[80] The community music center maintains communication with all referral sources. Many referrals are initiated by social workers, who frequently inquire as to the appropriateness of the service, the length of waiting-time, the fees, and the referral procedure involved for some particular client. The social worker is asked to have a music therapy referral form filled out and with proper medical signature. He also is asked to prepare a letter giving as much of the patient's background history as possible. The social worker's cooperation and endorsement have been important aids in the development of the music therapy center. Unlike the private psychiatrist, the institutional or agency psychiatrist is rarely available to contact community resources directly.

The social worker usually effects liaison between the music therapy center and the institutional or agency psychiatrists.

Case 1. A 20-year-old female patient was referred to the music therapy center after having spent eight years in a state mental hospital. She exhibited withdrawn behavior, confusion, loss of emotional control, and difficulty in concentration. Her initial response to both staff and peers was positive. She soon confided in her music therapist and in the director. She progressed in individual music therapy work and in the development of social relationships with other "members" through participation in the center's drama and art groups. Because of her inability to get along at home, she desired to move away from her family. Her psychiatrist and social worker were apparently in agreement for they had helped her prepare an application for residency at a half-way house. The center's therapists supported the patient's strivings for social life and independence (these were also among the goals indicated on the original referral form by the psychiatrist). Subsequently, the social worker telephoned to express the clinic's fears that the plans for independent living were premature, and that the patient might be forging ahead too rapidly at the center for her own good.

The home situation was unhealthy. The mother was continually "covering up" and feared that the patient would reveal some of the home difficulties. There were indications that the mother would sabotage (by sending her daughter back to the hospital) the patient's moves toward independence unless she were reassured, placated, and made to feel that it was her decision. Therefore, it became necessary to be less directly supportive of the patient's strivings and to take every opportunity to build up the mother's self-esteem. The mother was invited to observe one of the drama group sessions and to "sit in" on one of her daughter's individual music therapy sessions--all in an indirect attempt to reassure her that no one was working against her.

Periodic progress reports are prepared for referring agencies. The reports summarize progress toward the prescribed rehabilitation goals by reviewing the musical methods used, the musical progress made, and the general behavior of the patient. Information for the report is abstracted from the individual reports that are prepared after each therapy session. Repetitive patterns or changing patterns reveal the patient's methods of adaptation. The reports describe the patient's emotional responses, reactions to others, mannerisms, likes, dislikes, manner of speech and dress, posture, punctuality, etc., as well as musical responses. The regular progress reports tend to refresh agency contacts.

Occasionally, the music therapy center initiates a referral to another agency. Referral to a vocational rehabilitation agency may be indicated when a patient appears to have a persistent employment problem which has not received specialized attention. However, most patients are in psychiatric treatment as well as in music therapy, and their referral needs are discussed with the referring agency or doctor and left to the latter's discretion for follow-through.

The music therapy center collaborates with other agencies operating at the community level. Meaningful communication is facilitated by the realistic and "mutual awareness of the needs and subsidiary goals of other participants on the team."[81] It has proved helpful to participate in the programs of closely related professional organizations in order to increase our awareness of their concepts and methods.

The music therapy center provides aid for some persons after they have been discharged from hospitals. In these cases, it has been found helpful to have the referrals come from each person's psychiatrist or social worker, rather than from the hospital music therapist. In this way, more adequate diagnostic and case history material is provided, and channels are established for better supervision and guidance on an outpatient basis. However, the music therapists in the music therapy center and the hospitals communicate with, and assist, each other as much as possible in planning treatment for the patients.

Changing Patterns in Music Therapy--The Mental Patient and Community Care in England

Juliette Alvin

Due to the use of new drugs, there has been, in the last 20 years, a dramatic change in the treatment of mental disorder. These means also help to shorten the hospital stay of a number of patients; they sometimes enable the sick person to receive psychiatric treatment as an outpatient. During this time, a new philosophy has emerged; mental health is, in the words of the British National Association for Mental Health, "everybody's business," and the mental patient, ex-patient, or would-be patient should be as much as possible under "community care." This concept underlines the British Mental Health Act of 1959, the National Mental Health Act passed by Congress in 1946, and more recent ones. Today, the policy of "community care" is applied at a number of places in different countries. The day hospital, the aftercare or half-way house, and the psychiatric social club express this new philosophy under different names. Although some of them do more than rehabilitation work, for the sake of brevity they can be put under the heading of "rehabilitation centers."

These changes in psychiatric treatment and the new attitudes towards mental illness are bound to alter techniques--perhaps some concepts--of music therapy, since therapy should follow psychiatric advances to be of real service to the mental patient. For many years, especially in the United States, there has been developed a methodical and successful application of music therapy to patients hospitalized for many months or years. For them, the music program has to be structured and its timetable integrated with the hospital setting. The music, the music therapist, and the patient function in a sheltered and semi-predictable situation that can be planned accordingly. The music program is part of the hospital scheme and applied as such. But now techniques must be found which are applicable to (1) short-term patients in hospitals, (2) patients under treatment but not hospitalized, and (3) ex-patients in the process of rehabilitation. These three categories of patients demand from the music therapist imagination, insight, and the ability to find varied techniques to cope at once with unusual or unexpected situations. The music therapist should be mature enough to understand the working of the community and the family life of which the patient is a member.

The Short-Term Patient in the Hospital

Long-term patients usually need a well-structured program, but the short-term patient often needs an individual, flexible approach. The music therapist should first be conversant with the musical history of the patient in order to approach him correctly and to answer his immediate and future needs.

Music therapy with short-term patients can have two distinct goals. First, it can help to relieve the traumatic effect that hospitalization makes on many patients, help to create a familiar nonthreatening atmosphere, and help to fight boredom. These factors are important from the first month of hospitalization, and they may greatly influence the successful treatment of the short-term patient. If the subject is sensitive to musical experiences, music therapy also can contribute directly and rapidly to the psychiatric treatment. It may provoke immediate gratification, relaxation, stimulation, mental imagery, association, catharsis, abreaction, or sublimation--effects that may be immediately beneficial.

Second, a flexible program of music therapy may give the patient an incentive to carry on with musical activities when he returns to the community, provided the community can offer him the necessary facilities to do so. Musical activities and other factors which contribute to his social rehabilitation and stability may prevent him from being hospitalized again. The short-term patient rarely has the time or the strength during his brief hospitalization to learn or increase musical skills. But the music therapist should try to make him conscious of the pleasure of listening to, or making, music--experiences he may try to repeat on his return to normal life. This consists of an orientation towards the future when he may avail himself of the musical opportunities found in his community.

In Britain, special efforts are made to impress on various local bodies the value of music to mental health and to persuade them that it should be part of community care services as a therapeutic or preventive agent. Emphasis is placed on the need for rehabilitation centers in which musical activities can be organized. In these centers, mentally ill people can feel needed and accepted by the community through their participation in a music group. The music group should be in the hands of a music therapist to be of real value.

The Outpatient

Social rehabilitation is a gradual process which can begin in the sheltered situation of a hospital music group. The second step may take place in a rehabilitation center in which the atmosphere is different from the usual organized and planned life of the hospital. In these rehabilitation centers, the environment is permissive and not as demanding as in communal or family life. The prevalent theory in most of them is that the patient should try to work out his own therapy. Even when he is encouraged to play, sing, or listen to music, the patient enjoys and gains from the experience only when he makes some effort, however small, of self-control. Music can allow a great deal of freedom on a permissive basis, but also involves discipline and initiative. The patient should be helped to gain self-confidence and to develop a sense of responsibility and purpose within the group. The music therapist should allow him as much freedom as possible, sometimes even staying in the background and letting him organize or decide on musical matters. Nevertheless, the therapist should always provide the guidance necessary to bring any plan to a satisfactory result.

The outpatient or ex-patient may not be able to take a job. Even if he meets people at his place of work, he is in danger of feeling lonely. Human contacts of value to mental health are rarely those made through work; they are not always found in the family circle. They are made mostly through sharing common interests in which people can express themselves and communicate. Music is one of these interests.

The Music Therapist

Music therapy is applied on the same therapeutic principles with patients in or out of the hospital, or with ex-patients. But the music therapist working in a rehabilitation center in England is not a member of a hospital medical staff; he does not work under specific regulations; he has duties to perform on a much larger scale and is usually left to his own initiative and discretion. He should not be regarded as a medical aid by the patients, but as a musician, teacher, or friend. Music, too, should gradually lose its therapeutic connection and become associated with community life. Music then is regarded by the patient as a means of self-expression, enjoyment, and recreation. Nevertheless, he may continue to appreciate the therapeutic value of musical experiences.

All rehabilitation centers have a similar goal. They help the patient to return gradually to community life. Some centers are real, small-scale communities. The music group is a small unit which belongs to all members, even to those who do not participate in musical activities, because it is part of the whole hospital program. From the small, sheltered music group of the center, the patient can step into the larger unit of the entire center, and from there, when he has acquired the necessary strength and stability, he can move into the community at large. This gradual process applies to music, for instance, when he progresses from an informal singsong among the members to a fuller and more integrated singing group in the center, and finally joins a local church choir in his community. He still is sheltered by the group, but meets people enjoying music for its own sake, and with a purpose.

Music therapy in a rehabilitation center is an arduous task. Attendance is voluntary, and the irregular presence of the members often is disturbing, or even disruptive. It also may happen that outpatients under treatment are not in the proper mental or physical condition to participate, another disruptive fact that has to be accepted. The music therapist should provide the motivation which can attract the members towards the formation of a group aiming chiefly at enjoyment and emotional release, provided that the members' behavior is socially acceptable. In some centers, the groups achieve fine musical results which are of lasting value and use.

In such a setting, the relationship between the music therapist and the patient is on an individual basis. The music therapist has to make use of any flicker of good will and interest that may arise, but should not feel frustrated if members do not come, or if some of them are callous.

The therapist's musical and technical equipment should enable him to answer most requests made by the patients. The music therapist may have to transpose or read by sight some difficult piano part, arrange or write suitable parts for an ensemble, organize a dance band among the members, give information about a good music teacher available in the community, organize parties of members going to concerts, arrange informal visits to the center of performing amateurs or professionals, and encourage the members to give musical performances. Above all, there should be live music which creates personal communication, where recorded music, except for special purposes, is apt to fail.

The music therapist working in a rehabilitation center has another responsibility. He should be interested not only in musical goals, but in other aspects of social rehabilitation. He has to relate his work to the medical and social services in the community, those likely to give his patient an opportunity to join and integrate with a musical group. He must see the patient not as a sick person, but as a citizen who can share in community life and has something to contribute, maybe in music.

The Outpatient Chorus

Geneva Scheihing Folsom

In working with an outpatient club at a private psychiatric clinic, chorus work, scheduled once a week, was found to be highly effective. It was an open-end musical organization with patients coming in after being discharged from the hospital and patients leaving the outpatient club as they left their other treatment. In spite of the movement of patients in and out of the group, it was a stable organization, and it was possible to develop the chorus to a point where the patients were proud of their accomplishments. From what they had learned in the chorus, they were encouraged to move out into the community chorus and into various church choirs. Singing in the group was a nonthreatening experience for most of the patients. Those who had real difficulties relating to others were not forced to communicate during chorus practice. This gave them some closeness without being threatened. After singing, it was easier for them to have a social experience together. This particular organization did have professional direction. Those who worked in the club one night a week reported to various social workers and doctors concerning patients' progress and behavior. Patients were encouraged to direct their own organization, but at the same time there was always professional direction and supervision.

Experiences of a Music Therapy Intern in a Therapeutic Community Setting

Anne Gaffney

Since only six months were spent in the setting, this paper is not a factual study or a substantiated report on the program and its findings, but rather it is a statement of experiences in the program, impressions of it, and feelings about its possible implications.

A Maxwell Jones therapeutic community was established in Cottage 7B, or "the ward." The ward houses approximately 65 male patients. Nearly any diagnosis can be found there, and the age of patients ranges from 15 to 80 years. Length of hospitalization ranges from first admissions to those who have been hospitalized from 20 to 30 years. At one time, the ward was designated officially as the maximum security ward. The designation since has changed, but the reputation remains. Because of this, and because of the fact that 7B is located in that area of the hospital which was once the farm, it frequently was considered by patients and staff as an unfavorable place to be. This feeling was reflected in the large turnover of staff which 7B experienced prior to establishment of the "therapeutic community." And, of course, with most of the changes in staff came corresponding changes in concept. The end result of this was a "here we go again" attitude on the part of patients and staff. The ward staff during the six months was a psychiatrist, psychologist, social worker, music therapist, music therapy intern, and five psychiatric technicians on the day shift.

At this point, it seems appropriate to state briefly some of the underlying philosophy and basic premises. First of all, patients are people who are capable of responsible decision-making. Thus, the staff is not present to do things for patients which they can readily do for themselves. The staff did not consider patients qualitatively different from their friends and associates outside the hospital. This implied a social psychiatric definition of mental illness--that is, patients are in the hospital because they are having troubles getting along with people. The basic working premise was that the patient brings with him to the hospital his basic patterns of relating to people, and the way in which a patient relates to other patients on the ward is the way he relates to people on the outside, or to people in general. Therefore, by examining the way in which one patient relates with or affects another patient, one is examining in action the things which brought that patient to the hospital. This approach and its implementation were the principal techniques used.

The aim was not to suppress symptoms, but rather to keep them evident, so there would be something with which to work. For example, if someone was attempting or threatening suicide, he would be expected to talk about it in the ward meeting--why, and what might be possible solutions to his problem. Staff would not do it for him by giving him electroconvulsive therapy or "snowing" him with drugs to make him forget about wanting to die. He would be forced by staff and patients to deal with it himself. Another important treatment assumption was that staff could not cure anybody, but could only help people to help themselves. Patients who did not want help were discharged whenever possible and told they were welcome to come back if and when they changed their minds. However, only those were discharged who were not a serious physical threat to themselves or others.

At the outset, three meetings were scheduled daily. The first of these was a morning staff meeting lasting for an hour to an hour and one-half. This meeting was for discussion of anything which seemed significant at the time, whether involving ward management, patient problems, or staff difficulties.

Every afternoon from 1:00 to approximately 1:35, there was a meeting of the entire ward community, patients and staff. This meeting was the principal therapeutic opportunity for the ward and the focal point of the day. Here patients were expected to discuss their problems in getting along with other people, with themselves, with staff, or ward problems in general. Also, this was the time for staff and patients to examine, therapeutically, what was going on, or to discuss and point out various aspects of a problem being presented. The ground rule for these meetings was that the patient could say anything, no matter how aggressive or socially unacceptable. Physical acting out was against the rules. Few patients were being seen in individual therapy during this time. Most patients became accustomed to verbalizing in the group. They were told that what they wished to say was to be said in the ward meeting, no matter how bad or secret it seemed to them. No relatives were seen without the patient being present, and anything they had to say to the doctor was to be said in front of the patient. This produced many explosive situations, but in this way the distortions that occurred when patients and relatives were seen individually were kept to a minimum. Occasionally, relatives came to the ward meetings upon specific request, and the whole patient group would point things out to them. It was a trying experience for many of the relatives, because the patient group was invariably harder on them than the staff would have been.

The third daily meeting was a staff meeting which immediately followed the ward meeting. Its purpose was a discussion of what had gone on in the ward meeting and the implications as seen by the staff.

In many ways, the program was very difficult for the patients, who for years had been conditioned to having doctors and staff make decisions for them. It was quite threatening to the long-term patients, who were generally very dependent, enjoyed having people do things for them, and assumed that this was simply the way a hospital should be. This attitude was illustrated by the ever-present patient complaint, "We're too sick to do these things for ourselves."

The staff, including the music therapists, also experienced many difficulties in adjustment to changes in role identification. The roles of professional staff members are familiar. Traditionally, doctors make the decisions and prescribe medication; psychologists do group therapy and testing; and social workers interview relatives and make specific leave plans. The role of music therapists is less well known. On 7B, the staff participated in all roles. Almost all matters requiring a decision were brought up for the whole team to comment and act upon, regardless of in whose realm the matter would traditionally have fallen. This merging of roles posed problems for many.

Staff were expected, in their meetings, to discuss these problems and other personal feelings relating to the program, especially negative ones, just as patients were to do in ward meetings. The staff tried to set an example of adequate problem solving by the way in which they, as staff members, recognized and discussed their difficulties. One thing which greatly helped the music therapists with the problems of role identification was to change the emphasis from music to the personality and skills of the music therapist. In this way, the problem was greatly reduced. From this approach, it would follow that they were not necessarily failing to do their job because of not doing something pertaining to music. Their role, at least in the early stages of the program, was to function as therapists, not necessarily music therapists, and to do what they could as members of a psychiatric team to help bring about ". . . treatment, rehabilitation, and entertainment of the psychiatric hospital patient."

All therapy was ward-centered. Thus, many traditional ideas of referral were inappropriate. It made no sense to have a written referral from the doctor when all were present at the meetings. In the early stages of the program, it frequently seemed inappropriate to remove the patient from the ward and take him to the "clinical setting," because the emphasis of the whole program was on how the patient functioned in the ward setting. This view underwent significant modification as the staff became more familiar with the setting and more aware of how specific skills could best be utilized in it.

In addition to the daily ward meetings, some patients were in small-group therapy. These groups were not entirely self-contained. By this is meant that no patient in the ward meeting was able to say with justification, "I'm not going to talk about that problem here, because it was already settled in my small-group meeting." This limitation applied directly to how music therapists were to limit final solutions in individual and group programs.

In this setting, it was inappropriate to organize or initiate activities for patients, except for those who were extremely regressed. This was unique for music therapists who often had pushed and initiated activities on the wards. If the patients requested some activity, and organized a workable plan, only then did the therapist step in, and only with help on those aspects of it which the patients could not do for themselves. This approach was difficult.

As the program has developed, more of the specific skills of staff members are now being utilized in ways which increase the total effectiveness of the setting. Now the music therapist on 7B works more with the patients who have been hospitalized longer. Also, after a short time, it seemed quite appropriate in many instances to remove the patient from the ward for activity or music therapy. This kind of treatment can be only as effective as its feedback to the ward. In addition, the more acute patients on the ward have organized an activity committee to which the music therapist acts as a consultant.

Youth Socialization Program

Christine Christman

The program to be described took place from January, 1963 to June, 1964 in a state hospital in the western United States. In this state hospital system, music therapy falls within the auspices of the Department of Rehabilitation Services. In order to conform to this classification, the hospital chooses to view its adjunctive therapists as "general rehabilitation" therapists. This title leaves much to be desired in defining role function for the individual occupational, recreation, and music therapist. However, it does give a certain amount of freedom from rigid classification and allows one to focus on the role of therapist rather than that of music therapist. Active participation in programs, such as the following, was the natural outcome.

On October 29, 1962, the Youth Socialization Program (YSP) was initiated at the hospital. At that time, two other programs for adolescents (high school education and small group psychotherapy) were in existence, functioning separately. These had been initiated because of the growing number of young people, ranging in age from 14 through 20, in residence. The YSP was initiated and conducted by a psychiatric resident at the hospital. He believed that the two existing programs, though valid in the psychiatric treatment of adolescents, did not meet some very practical needs of the youth group. The youth needed one program which could be totally theirs to mold and conduct. There was need for a remedy for the lack of knowledge among the young of "appropriate human behavior" in social situations. This lack of social knowledge further widened the already existing gap of communication between the adolescents and adult "authority figures." Feelings of fear, anxiety, and resentment in each camp were growing rapidly. These feelings were then overtly manifested by further withdrawal, or, more commonly, extreme acting-out behavior.

In order to understand the YSP, it is necessary to discuss its basic goals, treatment philosophy, and specific nature as a group in comparison to the other two programs--high school education and small-group psychotherapy. As previously stated, the main objective was to give the hospital youth group an educational program to effect increased knowledge of appropriate social behavior. There are two essential factors in the stated goal which should be defined. Staff members were to gain knowledge of adolescent social behavior as well as the converse. Any behavioral response, whether as tangible as the spoken word or as intangible as a feeling tone, may be misinterpreted during the process of communication, especially when its definition has not been clearly established and accepted by all those involved. Adults can mistakenly judge adolescent behavior to be inappropriate. Therefore, a two-way informational exchange must be established in order to clarify problems of communication. Appropriate social behavior was meant to include every conceivable manifestation of human action resulting as a response to social contacts. It was felt that a knowledge of "how to act" was essential for adolescents.

The YSP can be identified as standing on a continuum between large-group and small-group psychotherapy. Its basic goals were (1) to offer specified knowledge through an informal educational process, and (2) to give the adolescents total responsibility for conducting the group meetings. It was hoped that insights gained into "feeling motivated" social behavior would be a large part of the information gained. The basic treatment philosophy, which all the staff members held in common and which they constantly attempted to communicate to the adolescents, was that every group member was a unique person who had valuable thoughts and feelings to communicate and important questions to ask. Due to the specific goals, treatment philosophy, and group nature of the YSP, the hospital viewed it as capable of providing a solution to the practical problems of the youth group which had been neglected up to that point. It was established as equally valuable and complementary to the existing high school educational program and the small-group psychotherapy.

During the 20 months this group was in existence, the adolescents constantly tested their democratic power. It was obvious that they wanted the meetings to be freed of all rigid structure. A change occurred in number of staff participating. Originally, it had been planned that the staff would include the psychiatrist, a rather complex coordinating council composed of nursing representatives from the referring units, and representatives from other departments. These staff participants were to act as adult authority figures and as resources in the informational exchange. However, the adolescents quickly complained that they were outnumbered and systematically began eliminating one staff member after another. This process continued until only two therapists were left--the psychiatrist and the music therapist. The roles of the two therapists were quickly identified as "papa" and "big sister."

During the whole course of the above program, the music therapist did not once use music. The music therapist began to see herself as a therapist, capable of observing and understanding somewhat of human behavior. Her concentrated training in music was of great value in that it gave the hospital a professional who was capable of utilizing the language of music in a therapeutic relationship, but this was never used in the YSP. However, she came to realize that the language pertinent to a particular therapeutic relationship must be determined by the goals and capabilities of all those involved in the relationship.

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35. Ewalt and Farnsworth, p. 244.

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PART IX

PLANNING AND UNDERSTANDING RESEARCH

E. THAYER GASTON

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PLANNING AND UNDERSTANDING RESEARCH

The Research Process

George L. Duerksen

Introduction

The behavioral science of music therapy depends upon the quality of the research performed and used by its practitioners. ". . . when practice runs ahead of knowledge, there is the danger that arrogance, dogma, and ritual may replace humility, the search for knowledge, and experimentation."[1] There is need for research that is skillfully and imaginatively planned, carefully executed, and judiciously interpreted and applied. The planning, execution, interpretation, and application of research are interrelated parts of an ongoing process, and to do any one of them well requires an understanding of the entire process.

Research studies mentioned in this résumé can be of use to the music therapist. However, the best use of research information depends upon wise interpretation and application, and many of the judgments that need to be made depend upon knowledge of research techniques. Such knowledge provides a "yardstick" for evaluating research. Because some music therapists have not had the opportunity to have formal training in problems of research, this part is included in the résumé.

Research and Scientific Method

Research, a process of inquiry,[2] is organized around a common focus.[3] The focus is generally some problem that needs to be solved.[4] A problem is encountered, questions are asked, and answers are sought. In studying himself and his environment, man has developed ways to control his inquiry.[5] Control increases his assurance that the answers he obtains do answer the questions he has asked and reduces the chance that he will accept the wrong answers as being true. One of the best of these techniques of control is scientific method. It has been pointed out that there is probably no such thing as "*the* scientific method;"[6] there are many. Scientific method is a flexible system for approaching phenomena. It is an impartial way of looking at things. It does not aim at persuasion, at finding "ultimate truth." It is merely a mode of analysis that permits one to state propositions of "if---, then---." It does not assume "self-evident axioms."[7]

This means that the scientific investigator does not set out to prove his point. The person who states "the purpose of this study is to show that music is beneficial in the treatment of behavioral disorders" is not setting out on a scientific research study; he is setting out on a "sales promotion." He can present facts that support his position, and suppress or explain away facts that contradict him. The scientific investigator does not set out to prove that music is useful in therapy. He attempts, instead, to find out whether or not music is useful. Rather than gathering data to support the conclusion he wants to reach, he gathers all the essential and appropriate data available and uses it to determine what the conclusion will be.[8] One of the prime characteristics of scientific inquiry is that the data, rather than the desires of the investigator, determine the outcome of the study.

There are several characteristics of scientific inquiry that aid the investigator in gathering data that is essential and appropriate. Kerlinger has said, "scientific research is systematic, controlled, empirical, and critical investigation of hypothetical propositions about the presumed relations among natural phenomena."[9] The characteristics of system, control, empiricism, and criticism provide the basis of scientific inquiry. System is apparent in the careful planning, organization, and execution of research. Techniques are organized and data gathered in hope of answering specific questions, not in random fashion in vague hope of discovery. Scientific research is controlled. The investigator analyzes the total situation and attempts to control, understand, and allow for every influence that bears on his research problem.

Scientific research is empirical. It looks at the world for information,[10] following Aristotle's empiricism rather than Plato's intuition. The procedures of scientific empiricism are public.[11] Because more than one person can look at the world, scientific studies are open to checking and replication by other investigators. The bias of an investigator cannot prevail, for the replication of a study by other investigators may duplicate the facts, but not the bias, of an individual. Science is critical. It questions its own results and states them in propositional, rather than absolute, fashion. It develops explanations which it holds until further information appears which provides the basis for more adequate explanations.[12] Thus, *scientific inquiry never results in absolute proof*; it only results in approximations of the truth. Yet, it seems to be the best way presently known to man for gaining verifiable information that allows him to describe and classify, analyze and explain, and predict future events.

Planning the Research Study

Planning research studies calls for skill, imagination, and care. The planning of a study requires looking both forward and backward. The investigator takes into account previous research, the nature of his research problem, the possible sources of data, and the possible methods of analysis.

Sources of Problems. There is an abundance of problems for research in music therapy. The processes of music therapy described by Sears, in Part II of this résumé, suggest many research problems for music therapists. Problems in need of research continually arise in clinical and educational situations. Many of the studies cited in this résumé have been described as "using no objective techniques of measurement or control." In other words, these studies have not been scientifically validated. There is no way for the reader to be sure whether the conclusions of these studies were based on valid data or on the biases of the investigators. Few of the objective studies reported have been replicated. Many completed studies reveal difficulties in measurement and evaluation, and thus, provide the basis for development of better methods for use in replications.

Information Bearing on the Problem. Once a problem which requires research has been encountered, the next step is to survey the related literature. This essential part of the research process often is not used effectively. Professional books and journals report many studies and speculations that can be of use in planning a study. The investigator needs to be acquainted intimately with knowledge about his problem area. He needs to know possible causes of effects, the experiences of other investigators, the aspects that have been investigated, difficulties that have been encountered in measurement and analysis, and to take all this information into account in planning his own study. If he fails to do this, he may unnecessarily invalidate his study by making errors in control, measurement, and analysis that could have been avoided through use of information gained in a review of related literature. Good research is founded on bibliography.

Turning Research Problems into Research Questions or Hypotheses. The problems on which research is based usually begin in general form. For instance, the investigator may wonder whether or not musical procedures can be useful in treatment for patients with some specific illness. Such a problem, as it stands, is too broad and unspecific to be answered effectively by scientific research. It must be turned into a research question or hypothesis, or a series of questions or hypotheses. One characteristic of a research question or hypothesis is concern with topics that are measurable. The music therapist may be interested in how many patients are helped by music therapy, and in how much they are helped.[13]

But it is impossible to measure how many are helped, or how much they are helped, unless the investigator knows what the word "help" means. How can "help" be measured? Definition by synonyms, such as "to aid; assist," does not suffice. "Aid" and "assistance" are no more easy to measure than is "help." Because of these difficulties, an operational definition often is developed.[14] An individual is regarded to have been "helped" when he exhibits certain specified behaviors. These behaviors can be observed and objectively described. The behaviors may occur a certain number of times, they may simply occur, or they may not occur. In any case, numbers or categories can be assigned, and the behavior measured.[15] The relationship of the method of assigning numbers and the statistical tests appropriate for use with those numbers is described in the section on *Measuring and Evaluating Research*. Other words in the problem must be similarly defined.

Exactly what patients are to be investigated? There are many types and degrees of severity of most illnesses. Factors including age, educational level, and social development may have some effect on the behaviors of the patient, so they also must be considered. Still further, music therapy must be defined. There are many procedures included within the realm of music therapy, and their haphazard application is likely to be less effective than a considered treatment program would be. In defining music therapy procedures for the purpose of the particular study, the investigator again needs to use the information gained in his survey of related literature. He can use this information to determine what specific techniques are most likely to help the patient to exhibit the specified behaviors that are to be measured.

Designing Studies to Answer Research Questions. The investigator next plans ways to find answers to his research questions. The original problem guides in the development of research design. Sources of data, techniques for gathering data, and methods of analysis are interrelated aspects of planning the research study. The investigator chooses the sources from which he will obtain data, the ways in which he will obtain it, and the ways in which he will organize and analyze it. These choices need to be made conjointly, for different methods of organization and analysis are suitable for different sources and methods of gathering data. To mismatch them would invalidate the results of an otherwise worthwhile study.

The most typical research designs in the behavioral sciences are the case study, the survey, and the experiment.[16] The case study exhaustively investigates one specified group or individual. It organizes the resultant data into a description, as complete as possible, of that individual or group, its characteristics and abilities, and the factors influencing it. This specificity prevents the case study from being practical for studies from which generalizations are to be made. Only if a series of case studies were to be conducted on a large and representative population of individuals or groups could valid generalizations be abstracted from the results.[17] Such a series of case studies provided the basis of a study by Michel.[18] However, most case research reported in professional journals and books describes only small or single samples, and thus provides little indication of the degree of generality of the factors investigated. The case study finds its primary use in investigations of specific situations in order to describe and understand only those specific situations.

The survey method is a useful research design in the behavioral sciences. There are two general types of surveys,[19] one which provides general description, and the other which investigates relations between variables. The survey researcher, instead of intensively investigating one sample, is interested in knowing something about a large body of samples that represents some population or universe.[20] If the sampling in a survey study is properly done, the results may reasonably be generalized to a larger population (sampling is discussed later). One major advantage of survey research is that it can provide information about a large population.[21] In this breadth of coverage, however, the survey usually looses the depth of information it can provide about any one element in the sample. (The survey can be used to compare samples from different populations.) Although surveys can reveal correlations and associations, they are at a disadvantage in the investigation of causal relationships. Just because two variables occur together does not mean that they stand in a cause and effect relationship. Cause and effect stand in a temporal relationship; cause must precede effect, no matter how short the interval between them. Most surveys are "instantaneous" studies. They investigate variables concurrently. Thus, it is difficult to establish the controlled time relationships necessary for investigation of causation through the survey method.

The best method for investigating cause and effect is the experimental method. When properly executed, experimental designs yield results that can be generalized to populations larger than the experimental sample.

> By experiment is meant any investigation that includes two elements: manipulation or control of some variable by the investigator and systematic observation or measurement of the result. In short, it means active intervention on the phenomena of interest to see what, if any, effects are produced by the intervention.[22]

Experimental designs not only include manipulation of some variable and measurement of the result of that manipulation, but they also include a control in which the variable is not manipulated, and the results of this lack of manipulation are measured.[23] Thus the investigator has, in his study, a basis for comparison.[24] All factors in the control and experimental situations are identical, except for the manipulation of the experimental variable. If manipulation of the variable produces some result in the experimental situation, and that same result does not occur in the control situation, the investigator can reasonably assume that the manipulation of the variable was the cause of the result measured. All experimental designs basically are extensions of this fundamental organization. Additional experimental and control groups may be added, but the fundamental pattern for comparison remains the same.[25] Techniques of statistical analysis have made it possible to investigate the effects of several variables at the same time, but they have not eliminated the need for control. With the exception of the ex post facto research design, which is sometimes classified as an experiment,[26] but which is extremely difficult to control, and therefore regarded as a weak method,[27] experimental research begins in the present and extends into the future. This allows more opportunity for the investigator to control or allow for the influences that will effect his results.

Three pre-experimental designs that are often reported as experiments are described by Campbell and Stanley.[28] The "One-Shot Case Study" is a design in which a single group is studied only once, subsequent to some agent or treatment presumed to cause change. This design has such a total absence of control that it is of almost no value. The "One-Group Pretest-Posttest Design," in which a group is tested, treated, and tested again, also lacks control. There is no way to tell whether any changes found were caused by the treatment or by some other event that occurred between the pretest and posttest. The "Static-Group Comparison" is identical in procedure with the sample survey, except the investigator attempts to establish causation. This is not possible through this technique, for "there are . . . no formal means of certifying that the groups would have been equivalent had it not been for the X [variable under study]."[29]

Research designs are spoken of as having "external validity" and "internal validity."[30] External validity refers to the way the subjects from whom the research data are gathered represent the general population in question, and internal validity refers to the control within the study which prevents the operation of nonrelevant factors that lead to errors in answering research questions. Problems of internal validity have been treated briefly in the discussion of experimental design, while problems of external validity are problems of sampling.

Sampling for Research

The general purposes of a research study determine the sources of data. At times, music therapists are interested in comprehensive knowledge about specific cases or therapeutic groups. In such instances, the case method is most appropriate. However, investigators in music therapy often are interested in applying research results to larger groups of persons than those from which they can obtain data. They are interested in "generalizing" their results.[31] They are interested, for example, in geriatric patients in general, rather than only those geriatric patients who comprise a certain "music appreciation" group in a certain hospital. In these cases, data are collected from a sample, rather than from a complete population.

There are three general problems in sample design: definition of the population; size of the sample; and representativeness of the sample.[32] The definition of the population is involved in the development of the research questions; the population should be appropriate for the aims of the study. In reviewing problems of research in psychiatric rehabilitation, Kandel and Williams found that many studies lacked any rationale for the selection of their sample.[33] The population from which the sample is drawn should be the population in which the research problem was encountered and to which the results are expected to be generalized.

After the population has been specified, the representativeness and size of the sample are considered. If the investigator desires to generalize his results to the larger population, rather than confining them to his sample, the sample must be representative of the larger population.[34] There is only one way in which the researcher can safely assume that he has chosen an unbiased sample--through the use of random sampling. "Random methods of selection do not allow our own biases or any other systematic selection factors to operate."[35] Nonrandom methods may result in a sample in which some members of a population are over-represented or under-represented. The techniques of random sampling are discussed in the section on Measuring and Evaluating Research.

The size of the sample is important, particularly in increasing internal validity. Small samples are usually undesirable and may yield meaningless or misleading results.[36] Large samples allow the process of random selection to reduce the chance of error or bias in the sample,[37] and increase the likelihood that the sample will be truly representative of the population from which it is drawn.

The situations in which music therapists work often prohibit the use of random samples for research. In these cases, the control and experimental groups should be matched as well as possible on each characteristic which may effect the variable under observation. This matching must be done on the basis of pre-experimental testing and should be statistically validated. It is possible to allow statistically, through the use of the analysis of variance and covariance, for discrepancies between control and experimental groups in measurable characteristics. However, unless the groups are matched on every characteristic that may influence the variable under observation, there is danger that some uncontrolled influence will intrude and result in erroneous research conclusions. Few music therapists, or any other persons for that matter, are omniscient enough to be certain that all possible influences have been considered in matching; those who are, have little need of research anyway. Many factors may result in bias of nonrandom samples. Levitt has described some of the difficulties of using volunteers, or "forced volunteers" such as patient or student populations, as research samples.[38]

Gathering Research Data

Data for behavioral research can be gathered by a variety of techniques, but in order for the research to be worthwhile, the data-gathering technique must be valid and reliable.[39] Validity pertains to what the technique measures,[40] and reliability pertains to how accurately or how consistently the technique measures whatever it does measure.[41] Development of valid techniques for gathering data in music therapy research is not an easy task. Isern (pages 136-137) has pointed out that measured intelligence alone is not a valid measure of mental retardation. This means that the researcher who is interested in studying the effect of some particular musical activity on "improvement" in mentally retarded children should not choose intelligence tests alone as a valid data-gathering device for his study. Similar difficulties exist in most areas of music therapy.

In planning his data-gathering procedure, the investigator must take into account his proposed method of analysis of data. Some data-gathering techniques provide information suitable for statistical analysis; others do not.

Among the most common data-gathering techniques used in behavioral research are tests and scales, interviews and questionnaires, and personal documents. Many data-gathering devices are available to investigators in published or unpublished form, but many research studies require the construction of special instruments for gathering information. The researcher is called upon to use his imagination in planning methods that will gather data he needs.

In music therapy, the focus of research attention is on patients rather than on music. When persons know they are being observed, their behavior often changes from its normal mode. This change may happen simply because the persons know attention is focused on them.[42] They may change their behavior in order to present themselves in what they consider the "most favorable light." They may try to "please" the investigator, or they may purposely attempt to confound the research study. In any case, such changes in behavior make it difficult to have confidence in the research results, for the behavioral changes may be due to factors other than those specified in the study. The use of methods developed among field workers in research may help minimize these uncontrolled behavioral changes which may invalidate research results.[43]

Tests and Scales. Psychometric and sociometric tests and scales are useful for gathering research data. Many of them are standardized and available in published form. These tests and scales provide data that is in numerical form or is relatively easy to quantify, and thus are particularly amenable to statistical analysis. Tests and scales provide data that can be useful in statistically matching groups by means of analysis of variance and covariance. Psychometric tests and scales allow measurement of factors such as intelligence, personality, and attitude, while sociometric tests and scales allow evaluation of factors such as group interaction, social distance, and socioeconomic status.[44] Also of value to the investigator are tests of special aptitudes and abilities, such as tests of musicality, manual dexterity, and coordination.[45] Achievement tests may also prove useful in research in music therapy. Buros[46] has provided a comprehensive description and evaluation of many published tests and scales.

There are many research questions, however, for which no published tests presently available can provide valid data. In such cases, investigators are compelled to construct their own testing devices. Before such devices can be used confidently, their validity and reliability must be established. A variety of methods for testing validity and reliability has been developed.[47] Many research designs in music therapy require the development of rating scales for use by a group of observers who judge the behaviors or performances of a group of research subjects. In these cases, validity often is increased by training the judges in the use of the rating scales. Levitt has described a method of estimating the reliability of clinical judgment when more than two judges are used.[48]

Interviews and Questionnaires. The interview is used often for gathering data in behavioral research. The interviewer uses his skill to establish rapport with the subject and motivate him to respond adequately and truthfully.[49] The interviewer usually uses a "schedule" which states exact questions, or one which has "open-ended" questions which can lead the interview more deeply into the individual dynamics of the interviewee's situation. The depth interview is most appropriate to case studies, while the interview with structured questions is more appropriate for survey or large-group experimental research. The interview is liable to a variety of biasing influences, and methods have been developed to enable investigators to use the interview technique in an objective, unbiased manner.[50,51,52] Large-scale research studies often make use of a questionnaire which can be printed and mailed to persons from whom data is desired. Many of the same errors and biases can arise in both the personal interview and the mailed questionnaire.[53,54]

Personal Documents. Personal documents[55] are especially useful in gathering data for case study research. The data they provide often is difficult to quantify, and thus they are of less use in survey research. Some of the most common personal documents available to researchers are biographies and autobiographies, letters, reports of dreams, expressive interviews, progress reports (medical and otherwise), and anecdotal descriptions. Documents are secondary sources of information, and techniques have been developed for determining their validity.[56] Documents created by scientists are regarded as being "professional documents." They usually tend to be more reliable than documents written by others.

Analyzing and Interpreting Research Data

Research data, having been collected, cannot answer research questions unless they are organized and analyzed. Description and analysis of research results can be made nonstatistically or statistically. However, "at its best science is statistical."[57] Changes in behavior may be described; but without statistical analysis, the investigator cannot be confident that the changes or differences measured in his research design were true changes rather than random fluctuations. The use of statistical techniques in analysis helps the investigator reduce his chance of accepting incorrect answers to his research questions.

Statistical analysis, however, is a tool. It does not in itself provide answers. It must be used logically, and its results interpreted reasonably in light of the design and execution of the research study. Even if the data gathered are valid and reliable and the experimental design provides adequate internal validity, the results cannot be generalized to a general population unless the research example can be assumed to be truly representative of that population. Care is necessary to assure that uncontrolled errors in the execution of the study (such as incomplete sampling, faulty use of measuring devices, extraneous confounding influences) do not invalidate the research results. Skillful and imaginative planning of a research study has no value unless the plan is carefully executed. The most careful execution, however, will not remedy the defects of a poorly planned study.

After a carefully designed study has been properly executed and the results meticulously analyzed, the investigator returns to his original research questions and the problem from which they were derived. The research results may help him overcome, or at least understand, the problem. The results, if published or otherwise disseminated, are available for use by others. However, research results should not be expected to be equally applicable to all situations. The human organism is complex, and the research sample that may have been truly representative of a particular population in 1960 may not truly represent that population in 1965. Research results, nevertheless, provide the best source of validated suggestions available to the clinician for improved practice in music therapy.

It can be seen that the conduct and interpretation of research in music therapy is an involved, highly selective, and rather precarious process. Each situation is slightly different from all others and demands its own adaptation of research techniques. In this, research becomes an art, for its adequacy and success depend upon the skill and perspicacity of those who perform and use it.

Measuring and Evaluating Research

Warren E. George

Introduction

In music therapy, as in the other behavioral sciences, quality research is of the utmost importance. Furthermore, research has to be scientific if it is to be qualitative. In the preceding paper, foundations of the research process have been presented. However, this process is not complete without methods for measuring phenomena (observable behaviors) and evaluating the measurement.

A primary aim of scientific research is description of phenomena, and this description in the research report must be so complete and so accurate that it will be useful to the reader. It is imperative that the researcher possess some knowledge of the means by which the phenomena are described. Thus, the purpose of this paper--to present the basic concepts, terminology, and methods which are necessary for understanding the measurement of phenomena and the evaluation of the measurement. In addition, the most efficient statistical techniques are presented which are appropriate to various experimental designs and different kinds of data. Although this is not a "how-to-do-it" manual, specific references for computational procedures and examples are made during the discussion of each topic.

Measurement

"Measurement encompasses all of the possible procedures by which numbers can be assigned to observable phenomena, in accordance with some orderly, stipulated plan. The numbers are then called scores."[58] Measurement, then, involves the assignment of numbers to observable phenomena so that the researcher has some basis for description. It is not always possible, however, in the behavioral sciences to obtain accurate quantitative or numerical data. Often, a number or a score may be only a gross estimate of the behavior in question. In other cases, the investigator may have to judge the performance of a subject on a test either by improvement, by no improvement, or by declination. Because of the important function of measurement in the research process, it is necessary to elaborate further on the three general types of measurement scales employed in the behavioral sciences.

The Nominal or Classificatory Scale. Measurement at its simplest and weakest level is represented by the nominal or classificatory scale, the terms being used interchangeably. It exists ". . . when numbers or other symbols are used simply to classify an object, person, or characteristic."[59] For example, when a psychiatrist makes a diagnosis about a patient with regard to a behavioral disorder (i.e., schizophrenic reaction, paranoid behavior, etc.), he is using a classificatory scale because he is using a symbol to identify that person with a particular class of people. The only relation involved in a nominal scale is that "the members in any one subclass must be equivalent in the property being scaled."[60] Any classification may be broad or specific, depending upon the definition of each class. A different example of a nominal scale is the use of a plus (+) sign or a minus (-) sign to indicate the improvement or declination of subjects on one test as compared with another test administered previously. In this case, there is no measurement of the amount of improvement. The only concern is whether or not there was improvement. Nonparametric statistics, which are discussed later, are the only statistical techniques appropriate for this kind of data.

The Ordinal or Ranking Scale. This type of measurement scale contains the same properties as the nominal scale, except that it goes one step further. As in the nominal scale, the ranking (ordinal) scale requires the objects in each subclass to be equal. In addition, it requires some kind of relationship among classes. These relationships are designated by the symbols (>) and (<) for "greater than" and "less than." Mentally retarded children usually are classified according to one of four adaptive behavior levels. Each level identifies children who are basically equal in adaptive ability, and there is a relationship among the various levels. That is, retardates in level I adapt to their environment better than (>) those in level II, level II > III, and so forth. Perhaps the most obvious example of an ordinal or ranking scale is when the experimenter is able to establish a rank order among subjects with regard to their amount or degree of improvement or declination on a test. Ranking or ordinal data require the use of nonparametric techniques.

The Interval Scale. "An interval scale is characterized by a common and constant unit of measurement which assigns a real number to all pairs of objects in the ordered set."[61] This is probably the strongest type of measurement that can be achieved in the behavioral sciences. A common example of an interval scale is the achievement test. This scale has the same property as a ranking scale in that persons can be ranked according to their achievement. However, *the distances between points on the achievement scale are of a known size*. This characteristic makes the interval scale the most powerful of the three types because it provides for the quantification of characteristics or the association of numbers with the positions of objects on the interval scale. Meaningful arithmetic computations can be performed on these numbers. Although some nonparametric methods are appropriate for interval data, efficiency of analysis is increased greatly if parametric techniques are used.

Statistical Methods

After an experimenter has obtained measurements on the persons or variable under investigation, he must have some tool by which he can make interpretations of the data. "Statistical methods are the techniques used to facilitate the interpretations of collections of quantitative or numerical data."[62] They provide the researcher with devices for making order out of chaos. "Statistics provides tools which formalize and standardize our procedures for drawing conclusions."[63]

Statistical methods and measurement cannot be separated. Without measurement, statistical methods are useless, and without statistical methods, nothing very valuable and meaningful can be derived from measurement. An excellent summary of the advantages of measurement and statistical methods has been set forth by Guilford.

1. They permit the most exact kind of description.
2. They force us to be definite and exact in our procedures and in our thinking.
3. Statistics enable us to summarize our results in meaningful and convenient form.
4. They enable us to draw general conclusions, and the process of extracting conclusions is carried out according to accepted rules.
5. They enable us to make predictions of "how much" of a thing will happen under conditions we know and have measured.
6. They enable us to analyze some of the causal factors out of complex and otherwise bewildering events.[64]

From the preceding, it can be concluded that statistical methods have an important and essential role in the research process. Without them, the researcher is handicapped greatly in deriving any meaningful answers from the data that have been collected.

Although there are numerous statistical techniques and many different ways to classify them, it will be helpful in this discussion to consider them according to the following three categories: (1) statistics for making descriptions; (2) statistics for studying relationships and making predictions; and (3) statistics for making inferences.

Statistics for Making Descriptions. When a researcher has collected a large amount of data, he needs to have some method for organizing this data so that pertinent facts can be described. Descriptive statistics are methods by which it is possible "to organize the data into some orderly form, to make summary statements about the general (average) level of magnitude of the numbers involved, to indicate in some way the extent to which these numbers tend to be alike or different in magnitude, and to show how they are distributed in value . . ."[63]

A *frequency distribution* is generally a good starting point for organizing a large amount of numerical data. The process involves ranking all the possible scores and then counting the number (frequency) of persons or objects having each particular score value. After the frequency distribution has been completed, it is a simple task to make some descriptive interpretations of the data. Examples of such descriptions would be:
(1) where (in what interval or intervals) most of the scores are concentrated; and
(2) where there is a sparsity of scores.

Although a frequency distribution usually is sufficient for studying the distribution of scores, it may be helpful to represent them graphically. Two accepted ways of graphic representation are the *histogram* and *frequency polygon*. Both of these graphic methods involve plotting the score points or midpoints of the score intervals along a vertical axis and the frequency on a horizontal axis. If the histogram is used, each score value is represented by a bar drawn from the vertical axis up to the frequency point for each score. This is commonly known as a *bar* graph and is particularly applicable for comparing the frequencies of individuals in different categories, such as showing the number of men drafted into the armed services during each month of the year. In a frequency polygon, the frequencies are connected by a line. This is commonly known as a *line* graph and is employed primarily for showing trends, such as the changing prices in the stock market. Both of these graphic techniques are useful for depicting the distribution of a set of scores. However, the frequency polygon is preferred if the scores of two or more groups are being compared on the same graph. For an explanation of how to make frequency distributions, histograms, and frequency polygons, there are many references available.[66,67,68,69,70,71]

Measures of central tendency are another very useful part of descriptive statistics. The three in common use are the *mean*, the *median*, and the *mode*. The mean ($\bar{X}$), sometimes referred to as the arithmetic mean, "is defined as the sum of all of the values of the observations, divided by the total number of observations."[72] The mean typically is considered the *average* of the scores and is the most common and frequently used of all the measures of central tendency.

The median (Mdn) is used occasionally in describing the "average" of a group. It is interpreted as being at the middle of all the scores and is defined as "that point on a scale of measurement above which and below which 50 percent of the observations fall."[73] When calculating the median, the scores are arranged in order of their magnitude, and the median (middle) point is determined by counting. If the scores are grouped into a frequency distribution, a slightly different computational process is involved.

The mode is the crudest type of measure of central tendency. It is simply that place in the distribution where there is the heaviest concentration of scores. Since there may be more than one point of concentration, the distribution can have several modes.

All measures of central tendency describe something about the form of a distribution. They show the tendency of the scores to cluster on either side of the mean, the median, or in the mode. If the mean, median, and mode are the same, then the distribution of scores is symmetrical or "bell-shaped." However, this is not always the case, and sometimes, one of these averages may be more meaningful than the other. If there is more than one mode, they should be reported, especially if they are not at adjacent points in the distribution. Since the mean takes into account the magnitude of each score value, it usually is considered the best measure of central tendency. There are, however, some instances in which the median may be more representative of the average. "In general, the median should be used where a few atypical cases of very large or very small value will distort the mean."[74] Both the mean and median should be reported to help show the form of the distribution. Most elementary statistics books discuss measures of central tendency together and include computational procedures.[75,76,77,78,79,80]

By using only measures of central tendency, a person is rather limited in describing precisely the form of the distribution. It is very helpful to know whether the scores are all close together or widely scattered. Descriptive statistics of this type are known as *measures of variability*.[81,82,83,84,85,86]

The coarsest measure of variability is the *range* which is found by subtracting the lowest score from the highest. The obvious weakness of this measure is that it only considers two scores. The *short range* (the middle 80 percent) and the *semi-interquartile range* (one-half of the middle 50 percent) are a little better indexes than the *range*. None of these measures considers the exact magnitude of each score. "Ordinarily, range indexes are useful only in situations in which a rather crude indication of variability is sufficient for the purpose of the particular analysis."[87]

The measures of variability generally used in research are the *standard deviation* (σ) and the *variance* (σ^2). These two measures are closely related in that the standard deviation is the square root of the variance. To facilitate an understanding of these measures, it seems best to approach them from the computational process. Computation of the variance involves (1) subtracting each score from the mean (the result of which is called a "deviation"), (2) squaring each deviation, (3) adding the squared deviations, and (4) dividing by the number of scores. All that remains to be done to find the standard deviation is to extract the square root of the variance.

The standard deviation and the variance are the most stable measures of variability because they take into account the magnitude or size of each score. If the mean and standard deviation are computed, it is possible to state exactly what percentage of scores fall between two points. For example, when the mean of an intelligence test is 100 and the standard deviation is 16, 68.26 percent (roughly two-thirds) of the scores fall between + and - one standard deviation from the mean (between 84 and 116). Similarly, approximately 95 percent of the scores fall within two standard deviations either side of the mean (between 68 and 132) and about 99 percent are within three standard deviations (± 3) either side of the mean (between 52 and 148). For practical purposes, all persons of a population are within ± 3 standard deviations.

It also is possible to study relationships between individual scores when the mean and standard deviation have been computed. By subtracting the mean from an individual score and dividing by the standard deviation, the individual score is transformed to a *standard score* (called a *z score*).[88,89] In this way, the raw scores can be converted into common units. "Furthermore, a standard score is of such a nature that it expresses a subject's *position in a given distribution both with respect to the mean and with respect to the variability*. It is thus relatively free from ambiguity."[90] The advantage of the *z* score, and all standard scores, is that the researcher is able to study relationships among individuals. For example, if two different intelligence tests are administered to two different sets of subjects, it might be concluded that an intelligence quotient (IQ) score of 116 in one group would be equal to an IQ score of 116 in the other group. This would be true if the means and standard deviations of both tests were 100 and 16 respectively. But, if either the means or standard deviations are unequal, then these persons cannot be considered to have equal IQ's. Suppose that the mean of one test was 100 and the standard deviation was 16, whereas these values were 100 and 15 respectively for the other. By transforming the two scores into *z* scores, it is found that an IQ of 116 on the first test has a *z* score of 1.00, while an IQ of 116 on the other test shows a *z* of 1.07. Thus, a person making a score of 116 on the second test has more intelligence than a person with the same score on the first test. In order for it to be stated that these two subjects have equal intelligence, a score of 116 on the first test and a score of 115 on the second are said to be equal because they both yield *z* scores of 1.00. By the use of a table,[91,92,93] the *z* score can be converted to a *percentile rank* which may be more meaningful to some people. This technique then ranks each individual with respect to his score and the scores of all individuals in the group. A percentile rank of 84 (written 84%ile) means that the *z* score is 1.00, and that 84 percent of the persons are below that particular score value.

Statistics for Studying Relationships and Making Predictions. The researcher may want to study relationships between two sets of scores from the same group of subjects to determine the correlation between the two sets of scores or variables. The two most popular statistical methods for assessing the correlation are the *rank difference* (a nonparametric technique) and the *product moment* (a parametric technique). If the correlation is a high one, it may be possible, by knowing a person's score on only one of the variables, to predict within reasonable limits what his score would be on the other variable. Thus, statistical techniques of this kind may be quite useful for prediction purposes as well as for studying relationships.

The degree of relationship or correspondence between two or more variables is expressed as a *correlation* *coefficient* (the symbol of which is indicated by *r*). Theoretically, this coefficient may be any value ranging from +1.00 to -1.00. An obtained value of +1.00 indicates a perfect positive relationship; that is, the person who made the highest score on one test also made the highest score on the other test, the person ranking second on one test was also second on the other, and so on. A value of zero indicates no relationship, whereas, a value of -1.00 is a perfect but *inverse* relationship. In the latter case, the person scoring the highest on one test scored the lowest on the other.

One word of caution must be stated for the interpretation of *r*. A coefficient of correlation is *not* a percentage and must not be interpreted as such. It does not imply causation, nor is an *r* of .80 twice as good as an *r* of .40. The interpretation must be in terms of a relationship. Just what is a significant correlation poses a difficult question to answer because it depends primarily on the purposes for which *r* was calculated. If the coefficient was calculated for use in prediction, an *r* of ± .90 (plus or minus .90) is considered necessary. However, for purposes of establishing relationships, a value much less than ± .90 may be accepted as being significant. As a general guide, Guilford has proposed the following rules.[94]

Less than .20	Slight; almost negligible relationship
.20-.40	Low correlation; definite but small relationship
.40-.70	Moderate correlation; substantial relationship
.70-.90	High correlation; marked relationship
.90-1.00	Very high correlation; very dependable relationship

The rank-difference correlation coefficient (sometimes called Spearman rank correlation coefficient) requires at least ordinal measurement. In this case, the experimenter must be able to rank each subject, in relation to the group, with regard to each test or variable. For computational procedures, these references are suggested.[95,96,97,98]

The product-moment correlation coefficient (referred to as Pearson *r* or Pearson product-moment correlation coefficient) is stronger and more accurate because it requires an interval scale of measurement. In other words, ". . . it takes into account the absolute size of the measures and not merely their rank-order."[99] Thus, if a person has achieved interval measurement, Pearson *r* should be used. For computational procedures, these references are recommended.[100,101,102]

If, after obtaining a high correlation coefficient ($>$ .90), a person wants to use it for prediction purposes, it is necessary to calculate a *regression equation*.[103,104] The answer one derives from this process will allow him to make a reasonable prediction about an unknown score, provided at least one of the correlated scores is known.

The rank order and the product moment are the two most popular methods for studying relationships. The computational procedures offer no insurmountable problems. There are other correlation techniques available for studying two variables as well as a statistical technique for determining the correlation among more than two variables. However, the rank-difference and product-moment techniques are sufficient for practically all purposes.

Statistics for Making Inferences. This category of statistical methods, statistics for making inferences, is very important in research studies. These studies are known as sampling studies because the experimenter works with a small group (sample). From the results of the experiment, he generally wants to make inferences about the large group (population). The term "population" refers to a specified group of people. For example, geriatric patients could be a population, as could cerebral palsied children, alcoholics, fifth-grade children, and so on. A population is a well-defined class of people, objects, or events. Since it is virtually impossible to conduct a research study with an entire population, it is necessary to use only a small portion of the population and generalize the conclusions to the total group. Statistical methods which aid the experimenter in accomplishing this aim are in the category of statistical *inference*.

Sampling has an important function in statistical methods and refers to the selection of those persons in the population who are to take part in the experiment. The sample must be an accurate representation of the population. In general, the inferences one can make from a research study are much stronger if a large number of persons is used. This does not mean that research cannot be done by using small groups.

The accepted way of choosing a sample is "random selection." This does not imply the dictionary definition of random; scientists have to work following a specially designated set of rules. "*Random sampling* is that method of drawing a portion (or sample) of a population . . . so that each member of the population . . . has an equal chance of being selected."[105] In other words, suppose an experiment is being performed in a hospital which has a population of 100 geriatric patients. In order to obtain a random sampling of 30 patients, the name of each of the 100 patients could be written on a piece of paper. These pieces of paper would then be placed in a container and then selected one at a time until 30 names had been drawn. However, it is customary to list each patient, assign him a number, and then make the sample selection using a table of random numbers. Several statistics books contain these tables, and two references explain the process for using them.[106,107] This process is not difficult and is a scientifically acceptable way of selecting a sample.

Statistical techniques for use in inference are many. Discussion of them is presented later. Specific application of these techniques to experimental designs will facilitate understanding. The important thing to remember is that samples must be representative of the population in order to eliminate bias. The reason some opinion polls are not always accurate is because the samples which were drawn do not indicate the "true" opinions of the population.

Parametric and Nonparametric Statistics

The whole body of statistical tests usually is considered as belonging to one of two groups--"parametric tests" or "nonparametric tests." In order to comprehend the difference between these two types of statistical tests, it is necessary to know the definition of "parameter." "A *parameter* . . . is a population value."[108] In other words, "if all the scores of a defined population are available and a mean is computed, this mean is a parameter."[109] However, parametric tests do not require the experimenter to know all of the actual population values. It is customary to estimate the population values from the sample values. A measure computed from a sample is called a "statistic."[110]

Parametric statistical tests, then, require certain assumptions about the population to be met, whereas "a nonparametric statistical test is a test whose model does not specify conditions about the parameters of the population from which the sample was drawn."[111] You do not have to make assumptions.

In general, there are three assumptions of parametric tests which must be met.

1. The samples have been drawn from a population which is normally distributed.
2. The variances of all the groups (samples) are homogeneous.
3. The variables to be measured are continuous and achieve interval measurement.

The third assumption is the most stringent requirement of parametric tests. Recent research by Norton with regard to assumptions 1 and 2 make these requirements less strict.[113] Providing that the third assumption has been met, it is generally agreed among statisticians that the experimenter should use parametric tests whenever possible unless there are gross departures from the first and second assumptions. Among the most common parametric tests are the various t tests, analysis of variance, analysis of variance and covariance, and factorial designs.

Nonparametric statistical tests--sometimes called "distribution-free" tests--make no assumptions about the distribution of the population from which the samples are drawn. The only assumptions associated with these tests are "that the observations are independent and that the variable under study has underlying continuity . . ."[114] The first assumption refers to the fact that observations of the different groups in the experiment must be independent. The second assumption states that the variable must be continuous, but this does not mean that continuous measurement must be achieved. In general, it is safe to assume that any variables under study in an experimental situation in behavioral sciences are continuous. The main advantage of nonparametric tests is that they ". . . do not require measurement so strong as that required for the parametric tests; most nonparametric tests apply to data in an ordinal scale, and some apply also to data in a nominal scale."[115] Among the most common nonparametric techniques are chi square, the sign test, Mann-Whitney U, and many others discussed later.

It should be stated that parametric tests should be used whenever possible because they are much more powerful techniques. (By "powerful," statisticians mean that one test is better than another because it will yield the same results but use a smaller number of

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subjects.[116]) If the assumptions underlying parametric techniques cannot be met, there is no other alternative than to use a nonparametric test. The advantages of nonparametric tests are that (1) they are easier to apply, (2) they may be used with nominal and ordinal data, (3) they may be used with small samples, and (4) they are distribution free.[117,118] They have the disadvantages of (1) being wasteful of data if interval measurement is obtained and (2) requiring a great amount of labor if the samples are large.[119,120] *The only safe rule to follow is to use parametric tests when the assumptions are met so that data are not wasted. If parametric tests are impossible, use nonparametric tests.*

Hypotheses, Regions of Rejection, and Significance Levels

Hypotheses, regions of rejection, and significance levels are interrelated considerations of the early part of the research process. The nature of the hypothesis dictates the selection of the region of rejection and also influences the establishment of the significance level. Although the decisions about these three items depend upon each other, they are discussed here in the order in which the decisions about them usually are made.

Hypotheses. The basic purpose of research is to find answers to questions which have arisen from theories and/or from other research studies. Statistical techniques help provide these answers, but it is impossible to prove anything as being absolute when doing research. The only thing that statistics do is to help the researcher disprove all possible answers except one. This, then, is considered a tenable answer until it has been disproven.

When planning an experiment, the investigator usually makes a *conjectural* statement regarding a theory he has about some particular problem. This is known as the *experimental* or *research hypothesis* and is the answer he believes might be tenable. To protect statistically from bias, it is customary in research to state the *null hypothesis* (H_o) first. It is the hypothesis of no difference and ". . . is usually formulated for the express purpose of being rejected."[121] If the null hypothesis is rejected, then the *alternate* or research hypothesis is accepted.

The alternate hypothesis (H_1) may be stated in different ways, depending on the theory or theories of the experimenter. For example, if the research hypothesis states that the experimental and control group will differ with respect to means, then H_1 is that

$u_1 \neq u_2$ (mean 1 is not equal to mean 2). In this case, the experimenter is not interested in which mean is the highest, but merely in whether there is a difference. If a prediction is made that the mean of the experimental group will be larger than that of the control group, then H_1 is that $u_1 > u_2$. In any case, H_o is tested against H_1, and H_1 must be established before the data gathering begins.

Regions of Rejection. Another item that must be established prior to experimentation is the region of rejection. When referring to a region or area of rejection, the experimenter is referring to that portion of a distribution where the test statistic must fall if he is to have any confidence in stating that means are actually different or that one is better than another. Theoretically, if an experiment was run an infinite number of times yielding an infinite number of test statistics, a distribution could be made of these test statistics from the various samples. The experimenter is interested in determining whether the sample value observed is associated with H_o when H_o is true. In order to be most certain that the obtained value is false, the region of rejection is placed at the extreme ends or tails of the distribution. If it falls in this small area, then it is probably false, and the experimenter has reason for rejection.

The region of rejection depends to a large extent on H_1. That is, if H_1 is that $u_1 \neq u_2$, then the region of rejection is called a two-tailed test. On the other hand, if H_1 is that $u_1 > u_2$ or that $u_1 < u_2$, then a one-tailed test is used. These two terms refer to the tails of the distribution--the extremely low scores and the extremely high scores.

Significance Levels. After establishing the region of rejection, it is necessary to decide how small the area of this region is to be. The size of the area of rejection is called a "significance level" and is referred to in statistical terminology as "alpha" (α). This is the probability of rejecting H_o when it is really true. Because the experimenter needs to be reasonably certain that he rejects H_o when it is really false, α must be set rather small. The two levels which generally are accepted are the .05 (5 percent) level and the .01 (1 percent) level. In essence, the experimenter is saying that he is willing to be wrong 5 times out of 100 or 1 time out of 100. Although it is customary to use the .05 or .01 level of significance, there is nothing "sacred" about them, and experimenters often may require either lower or higher significance levels to reject H_o. It is impossible to establish any constant level of α that will be appropriate to all situations. If the experimenter is interested in adopting a new teaching method which would amount to considerable expense, the significance level would probably be set quite high ($<$ .01) in order to avoid the influence of any chance factors. If the concern is about how many mentally retarded children were helped because of a new therapy technique, a much lower level (perhaps .20) would be acceptable. If a level as low as .20 were selected, the probability would be increased that chance factors could influence the outcome. No matter what the experimenter decides to accept as significant, it is considered good practice to follow this recommendation. "In reporting his findings, the researcher should indicate the actual probability level associated with his findings, so that the reader may use his own judgment in deciding whether or not the null hypothesis should be rejected."[122]

Choosing the Statistical Test

Before conducting an experiment, it is important to choose an appropriate statistical test. As is the case with the hypothesis, the region of rejection, and the significance level, this decision must be made before the experiment is performed. The primary reason for this is that the statistical test which is chosen must be appropriate for the data (nominal, ordinal, or interval measurement) the experimenter is able to gather. In addition, the assumptions of the statistical test dictate some of the procedures that must be followed in planning the experiment. This section describes some statistical techniques which are applicable in specified pre-experimental and experimental conditions. Only a cursory examination of each particular technique is given, and the reader is referred to specific sources for computational procedures. A brief explanation about making decisions after the statistic has been computed is included. These descriptions should help the research reader judge whether appropriate statistical techniques have been used and proper conclusions drawn.

The Study with One Sample. In the study which uses only one sample, the typical question is whether or not the sample came from a specified population, either theoretical or known. Statistical techniques for testing a hypothesis of this kind are known as goodness-of-fit type. The typical situations are (1) that the frequencies observed are the same or different from what one would expect, or (2) that the mean of the sample is the same or different from the mean of the population.

The t test.[123,124] In the one-sample situation, a common parametric technique to use is the *t* test. In addition to meeting all the assumptions of parametric statistics, the mean of the population must be known in order to use this test. This particular technique is useful for comparing the sample mean with the population mean. After completing the calculation of the *t* statistic, it is necessary to refer to a table of *t* values. If the obtained value is larger than the table value, H_o is rejected in favor of H_1. It is concluded that the sample is significantly different from the population and, therefore, must be from a different population. If H_o is accepted, then the conclusion is that the sample is from the defined population.

Chi Square.[125,126,127,128] The chi square (χ^2) one-sample test is a nonparametric test of the goodness-of-fit type and may be used with nominal measurement--the classification of objects into categories. χ^2 is a test of the significance of differences--the differences, in this case, being between the observed frequencies and the expected frequencies in the categories. The classic example of this test is to consider a coin being tossed 100 times. It is expected that the result will be 50 heads and 50 tails. After the number of observed heads and tails is obtained, χ^2 is computed by comparing the differences between observed and expected frequencies. The obvious conclusion that can be made, if the value is larger than that in the table, is that the observed frequencies differ significantly from the expected.

This particular test also can be used for analyzing the responses to a question. For example, it can be hypothesized that all persons responding to a particular question will be equally divided among all possible answers. This becomes the expected frequency for each possible answer and the observed frequencies are then compared with them. If the resultant χ^2 is significant, then there is some factor other than chance which influences the responses. This same test is applicable when the same question is submitted to a number of persons both before and after a particular treatment. The responses obtained prior to treatment are considered as the expected frequencies, whereas those obtained afterwards are the observed frequencies. The χ^2 goodness-of-fit test also may be used for testing the hypothesis that the scores on a test are normally distributed. Guilford shows the preliminary steps to be taken in this process.[129] Then it is simply a matter of computing χ^2.

Kolmogorov-Smirnov One-Sample Test.[130] Another test of the goodness-of-fit type is the Kolmogorov-Smirnov one-sample test. This, like χ^2, is a nonparametric test, is of the same type, and is used for the same purposes. If the sample size is small, the Kolmogorov-Smirnov test is preferred because it is more powerful than χ^2. The reason for this is that χ^2 requires a minimum number (usually 5) of responses in each category while the Kolmogorov-Smirnov test does not.

The Experiment with Two Independent Samples. When subjects from a defined population are assigned randomly to a control group and an experimental group, these two groups are known, in research terminology, as independent samples. That is, the persons in each group were randomly assigned to a treatment group after having been selected at random from the defined population. The purpose of the different statistical tests for comparing two independent samples is to answer the question, "Are the two samples, after treatment, from the same population, or are they now from two different populations because of the treatment?" This experimental situation involves administering a different treatment to each group and then comparing these two groups afterwards by means of a test or evaluation of some sort.

The t test.[131,132] The usual parametric test for this situation is the t test for independent samples. Like all parametric tests, it requires that certain assumptions be met, especially interval measurement. The null hypothesis is that the mean of group 1 is equal to the mean of group 2 (H_o: $u_1 = u_2$), and the alternate hypothesis may be either $u_1 \neq u_2$, $u_1 > u_2$, or $u_1 < u_2$. If the obtained value of t is less than the table t value, then H_o is accepted, and it is concluded that there is no statistically significant difference between the two groups. On the other hand, if H_o is rejected and H_1 is accepted, then the conclusion is based upon the prediction inherent in H_1.

The Mann-Whitney U Test.[133] The Mann-Whitney _U_ Test is perhaps the most common nonparametric test for comparing two independent samples. It requires at least ordinal measurement, and thus, tests the significance of difference of the ranks of the two groups. In essence, this test involves the ranking of all individuals in both groups with regard to the variable in question and then adding the ranks of the members of each group. That the average rank of the two groups is the same is H_0. If H_0 is rejected, then it may be said that the average rank of one group is significantly higher than the other.

Chi Square.[134,135,136,137,138,139,140] Another useful nonparametric test is the χ^2 test for two independent samples. The main advantage of this technique over the _t_ test and the _U_ test is that it requires only classificatory measurement. Like the χ^2 discussed previously, this technique tests the significance of differences between expected and observed frequencies in discrete categories. This χ^2 is appropriate if the purpose of the experiment is to determine whether boys and girls have differing opinions with regard to the most pleasurable physical activities. The hypotheses are either that they do or do not differ.

The Experiment with Two Related Samples. Whenever the experimenter is able to match the subjects in one group with the subjects in the second group according to some criterion such as IQ, the efficiency of the experimental design is greatly increased if the matching is on a criterion related to the experimental variable. Matching makes the two samples related. Another way of matching is to administer a pretest and a posttest to each subject in one group. In this case, the pretest sample is related to the posttest sample by using each subject as his own control. With two matched groups, the usual question is: "Do the experimental and control groups differ significantly after treatment?" When one group is given a pretest and a posttest, the question is: "Do the posttest scores show a significant improvement over the pretest scores?" In both situations, the investigation is centered on the differences between the pairs of scores.

The t Test.[141,142] Provided the assumptions for parametric statistics are met, there is a _t_ test for studying the mean difference ($\bar{D}$) of the two sets of scores. Although this statistical technique is limited to studying only two sets of scores, it is the most powerful test that can be used in this type of experimental situation.

The McNemar Test for the Significance of Changes.[143] This nonparametric test is particularly useful in the "before and after" type designs in which each subject is used as his own control. It is particularly suitable ". . . when the data are in frequencies which can only be classified by separate categories . . ."[144] In this way, it is possible to see the number of subjects who change their responses, one way or another, from the "before" to the "after" and to determine if the change was statistically significant. An experiment reported on page 221 of this résumé used this technique.

The Sign Test.[145] If it is possible to determine that each subject is "better than" or "worse than" his matched subject, then the sign test is applicable. This is a very easy statistical technique because it involves only plus (+) and minus (-) signs. Because of its simplicity, it is suitable for making a gross estimate of the number of subjects who improved on the posttest. If the data is stronger than + or - signs, a more sophisticated technique may be used. The sign test should be used when the experimenter has to measure his subjects using only + and - signs and when the sample size is quite small (six or less).

The Wilcoxon Matched-Pairs Signed-Ranks Test.[146] This statistical test is very similar to the sign test in that it uses + and - signs. In addition, it takes into account the relative magnitude of the differences. That is, the experimenter is able to rank the differences. Thus, it is a more powerful device than the sign test. In terms of the Wilcoxon test, H_o is that the sum of the positive ranks is equal to the sum of the negative ranks. If the departure from H_o is large enough, then the conclusion is that there was a significantly positive difference, provided the positive sum $>$ the negative sum. The reverse is also a possibility.

The Experiment with More than Two Independent Samples. Thus far, the discussion of statistical techniques for different situations has been concerned with (1) comparing one sample to a population or a distribution and (2) comparing two samples. In research, it often is desirable to compare simultaneously the performances of more than two groups. In the situation with more than two independent samples, the experimental design is basically similar to that discussed earlier with regard to independent samples. There are specific statistical techniques for comparing more than two groups at one time. Typically, H_0 is that all groups are equal with regard to the item in question. If H_0 is accepted, the computation is finished. But, if H_0 is rejected and H_1 (the groups are significantly different) is accepted, it usually is desirable to make all possible comparsions of two groups using the appropriate parametric or nonparametric technique.

Analysis of Variance.[147,148,149,150,151] The usual parametric test for comparing several independent samples is the analysis of variance, sometimes called the F test. If the assumptions of parametric tests can be met, especially interval (quantitative) measurement, this test is the most powerful one available. If a significant value is obtained, it is concluded that the groups are significantly different, and t values are computed for all possible combinations to determine which group, or groups, differ significantly from the others.

The Kruskal-Wallis One-Way Analysis of Variance by Ranks.[152] The most efficient of the nonparametric tests for three or more independent samples is the Kruskal-Wallis test.[153] As the title implies, this test employs ranks for making comparisons. A requirement for this technique is that ordinal measurement be achieved. From the ranked data, the statistic, H, is computed. If a significant H is obtained, then U comparisons are made between the groups.

The χ^2 Test for More Than Two Independent Samples.[154] The χ^2 technique has been encountered in many different types of experimental designs and is useful when the data are classificatory. It is equally applicable in this situation and ". . . is a straightforward extension of the chi square for two independent samples. In general, the test is the same for two independent groups and three or more groups."[155]

The Experiment With More Than Two Related Samples. As was stated previously, the efficiency of an experiment is greatly increased if the subjects are matched in each group according to some relevant criterion variable. Statistical tests for two related samples limit the experimenter to two possible comparisons. He may compare one set of scores for two matched groups or compare two sets of scores for one group. These techniques are inadequate when one wishes to study one group under several conditions.

Techniques for making multiple comparisons are applicable for studying several groups, all of which are exposed to several different conditions. In these designs, each subject or group is assigned a row, and each treatment condition is assigned to a column. By use of the appropriate statistical tools, one is able to compare (1) the main effects of the different treatments on all subjects or groups, (2) the main effects of each subject or group across all treatments, and (3) the simple or interaction effects of each subject or group with each treatment. Statistical tests for these purposes are often called "factorial designs" or "analysis in a double-entry table." It is evident that statistical techniques for experimental designs of this nature are more complex. However, they are quite important in research because they enable the experimenter to study several effects at one time.

The Two-Way Analysis of Variance.[156,157] The typical parametric test for multiple comparisons is the two-way analysis of variance. It is an extension of the analysis of variance described earlier and is appropriate for this design when interval measurement has been obtained. It is customary to test for interaction or simple effects first, because if a significant F value is obtained, tests must be computed for all possible comparisons. However, if this test is nonsignificant, the main effects of rows and columns is calculated for finding significant differences. Again, if either of these last two F tests is significant, t tests must then be calculated for all possible comparisons between rows and between columns.

The Friedman Two-Way Analysis of Variance by Ranks.[158,159] The Friedman test is a nonparametric two-way analysis of variance technique which requires ordinal data. It allows the same comparisons as the parametric two-way analysis of variance, except that it is less powerful.

The Cochran Q Test.[160] This nonparametric test is especially useful with nominal or classificatory measurement. As an example, the experimenter could test whether the various items on a test differ in difficulty by analyzing data consisting of pass-fail information on several items for a number of individuals. This technique also could be used for studying attitudes or preferences of individuals. In these kinds of situations, the Q test allows one to determine the significance of the number of favorable responses.

In the two nonparametric tests just discussed, the only thing that the experimenter can ascertain is whether there is a significant overall difference. If there is, it is necessary to make all possible comparisons of two groups by choosing a statistical technique appropriate for data from two related samples in order to ascertain which groups or treatments are significantly different from each other and which are not.

Other Factorial Designs. Parametric statistical literature abounds with various factorial designs. The preceding discussion was concerned with two-way analysis. However, there are designs for three-way, four-way, and even more complex types of analyses. Although the computations often require an electronic computer, the principles are quite similar and allow the researcher to study several variables and their interactions simultaneously.

Analysis of Variance and Covariance.[161,162] There is one more statistical technique that warrants discussion because of its uniqueness. It has been stated several times that matching the groups makes the experiment more efficient. However, this is not always possible. It becomes increasingly difficult when more than two groups are involved, and it is almost impossible when the matching is done using two criteria rather than one. Analysis of variance and covariance mathematically matches all the groups (two or more) in the experiment according to one or more criteria on which interval measurement can be achieved. In addition to the usual parametric assumptions, this test requires that the variables held constant (i.e., mathematically matched) are correlated with the experimental variable. The stronger the relationship is, the more powerful is this particular statistical test. In addition, covariance assumes that the amount of correlation is nearly the same for all groups. If all of the assumptions can be met, then, the analysis of variance and covariance mathematically matches the groups according to the criteria and tests H_o that all the adjusted means of the experimental variable are equal for all groups. If the adjusted means are significantly different, then a special t test must be computed on the experimental variable for all possible combinations of groups.

Summary

The purpose of this section, "Planning and Understanding Research," has been to help the music therapist understand the research process, rather than to provide a "how-to-do-it" research procedure. An understanding of the concepts and procedures described provides more meaning and understanding of research studies. After reading studies which use the various statistical techniques presented, their applicability will be clearer to the learner. It is certain that if music therapists understand research, they will become more actively involved in it. For the most part, only by this objective process can knowledge in the behavioral science known as music therapy be increased.

Annotated Bibliography

Although there are a number of books available for studying statistical methods, the references listed below have been found very useful. Specific references for the best examples of computational procedures from each book are included in the previous discussion of various statistical tests.

Barnes, Fred P., *Research for the Practitioner in Education*, Department of Elementary School Principals, National Education Association, Washington, D.C., 1964.

An elementary overview of the research process. Includes applications of some non-parametric techniques to specific experimental designs, but does not include any computational procedures or any tables.

Blommers, Paul and E. F. Lindquist, *Elementary Statistical Methods*, Houghton Mifflin Company, Boston, 1960.

A text for a beginning course in statistics. Includes descriptive statistics, t tests, product-moment correlation. Examples are given, but the language is probably too sophisticated for the person not versed in mathematics. Has normal curve table, squares and square roots table, t table, correlation table, and random numbers table.

Edwards, Allen L., *Statistical Analysis*, Holt, Rinehart and Winston, New York, 1958.

An excellent beginning book. For the most part, the examples are excellent. Has descriptive statistics, t tests, analysis of variance, and correlation coefficients. Includes tables for random numbers, squares and square roots, normal curve, t, F, and χ^2.

Edwards, Allen L., *Experimental Design in Psychological Research*, Rinehart and Company, Inc., New York, 1950.

Designed for a second course in statistics. Covers χ^2, correlation, t tests, analysis of variance, factorial designs, and analysis of variance and covariance. Examples are good, especially covariance. Provides answers to example problems in an appendix. Tables included are random numbers, squares and square roots, normal curve, and significance levels for χ^2, t, r, and F.

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The same as the first edition, except that the example for analysis of variance and covariance is not as simplified. New advanced statistical techniques are presented.

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The design and purpose of this résumé of music therapy would not be complete without the contemplation, from a different point of view, of several principles which form much of the foundation of music therapy. Evidence of the fundamentality of these principles comes from the fact that each has multiple sources. Enunciations of the same basic principles are found whether one studies man and his music, the processes of music, research in music therapy, clinical practice, descriptions of the needs of patients, community centered therapy, or the prescriptions and recommendations of psychiatrists. Wherever we look, the functions of music have a striking similarity.

Not at any time, from planning to completion of this résumé, were suggestions made to any contributor as to the specific content of his writing. Areas were assigned to various symposium members. Clinicians were asked to write and to present case histories from their particular fields of expertness. The treatment aims of psychiatrists and therapeutic teams had been stated before descriptions of clinical practice or case histories were written. Considering these conditions, it is remarkable that so many sources should agree so precisely about the importance of the three following functions of music therapy.

1. The establishment or reestablishment of interpersonal relationships.
2. The bringing about of self-esteem.
3. The utilization of the unique potential of rhythm to energize and to bring order.

The agreement of theory, practice, and research in music therapy may be brought into sharper focus by recalling how often music has aided in the establishment or reestablishment of desirable interpersonal relationships. In the evolution of man and his cultures, man gradually, but surely, has been drawn into closer interpersonal relationships. Music, from day to day in nearly all cultures, has been one of his most satisfying group activities, not because of its unique sensory appeal alone, but because it was, and is, nonverbal communication. It is derived primarily from the tender, or positive, emotions--those which draw individuals together. The greatest potential of music arises in group situations. Sears, in "Processes in Music Therapy," devotes nearly one-third of his discussion to *Experience in Relating to Others*. Music, alone, serves as a reason for being together--the individual subordinates his own interests to those of the group. His self-expression becomes socially acceptable. Music enhances the social situation.

In descriptions of clinical practice and case histories, "music and patient relationships have been generally assessed as two mutually supportive ingredients for successful therapy." "It has been shown repeatedly that a music group provides the earliest and safest group experience for the most seriously ill mental patients." The efficacy of the music group has been referred to in a number of ways and in a large majority of the case histories. "The patient needed to achieve in socially acceptable ways," so she was placed in a music group. The patient cooperated and "helped other patients." "The disciplines of belonging to a group require personal organization, recognition, and acceptance of reality goals." "It is believed that this patient was helped greatly by the subtle pressures of the group." "Not all the children cared for every song, but each child learned to respect the rights of the others." These few statements are representative of literally scores of very similar or identical expressions.

Of most immediate and pragmatic importance to the music therapist are the prescriptions, recommendations, treatment aims, and suggestions of the psychiatrist or therapeutic team. "Group participation is essential to the life adjustment of retarded persons." "Patients [are] sent to music therapy for social interaction." "The referrals often indicate one or more of five areas [of which] Socialization" is number one. "Music therapy goals were to . . . utilize the socializing effects of musical group efforts." "One of the particular problems of the child with cerebral palsy is that of meaningful group activities." "To develop skills which will help them avocationally . . . whey they return to the community." ". . . to direct the patient in his relationships with other people."

The basic argument of Braswell in "Social Facility and Mental Illness" is that "there is more than a chance relationship between social isolation and behavioral disorders." Man is a social being. Interpersonal relationships are important to him and necessary for him, because it is from social and personal involvements that there develops systems of shared expectations, patterns of emotional relatedness, and modes of social adjustment, all of which are part of the concept of humanness, of humanity, and of that which most differentiates man from lower animals. From this, it follows that man must have a place and a function with his fellows. He must be paid some attention, have status, and respond accordingly.

The other side of the coin of good interpersonal relationships is self-esteem. Bringing about self-esteem is a second basic function of music therapy. The frequency of statement, from many sources, of the need for self-esteem is equal to that for social adequacy or adjustment. One cannot exist without the other. Remembering the definition of "interpersonal," we may say that "self-esteem" is a confidence and a satisfaction in oneself; it is self-respect, and one's good opinion of himself. A partial list of the synonyms of "self-esteem" is sufficient to point up its importance and acceptance--self-confidence, gratification, pride of accomplishment, competency, self-sufficiency, self-satisfaction, self-security, etc. The need for competency is a need of young and old alike. This need is openly manifested in the young child and often only thinly veiled in the adult. All must have some competency if they are to have self-esteem. If there is no self-esteem, there is usually anxiety. The attestations of psychiatrists, psychologists, and clinicians leave small doubt as to the excellence of music as a means for developing or bringing about self-esteem.

The third item of discussion in this "Afterword" is the utilization of the unique potential of rhythm to energize and to bring order. Rhythm is the most potent, the most dynamic element in music. It is rhythm that "makes the wheels move." Without it, there is no periodicity; there is no order, only chaos. It is rhythm that most easily passes over, not only from one culture to another, but from one subculture to another. Although it has not been referred to as frequently as "interpersonal relationships" or "self-esteem," it has been named the most important element of music for the retardate and the handicapped. Only the most sophisticated enjoy music to which they cannot beat time, and even they yield muscularly, at times, to the takt. Much was made of rhythm in "Man and Music," and in "Processes in Music Therapy," and rightly so. Too often we have taken the nature of rhythm, its function, and its effects for granted. A second perusal of this résumé with an appreciative attitude for the effects of rhythm will bring awareness and acceptance of its potency and its necessity, even in those instances in which rhythm has not been the center of the writer's attention.

Thus, music is a gently insistent, but dynamic, encouragement of man to share with, and expect fearlessly from, his fellowman, and in so doing, to achieve a happy confidence and satisfaction in himself. In the words of the poet, Sidney Lanier, "music is love in search of a word."

--E. Thayer Gaston

APPENDIX

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Compiled by

Erwin H. Schneider

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